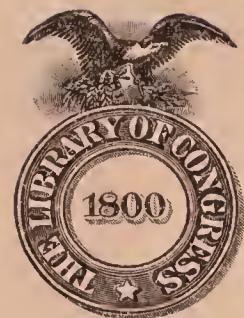


# HISTORY of the ORDNANCE REPAIR SHOPS.

1870-1871

..MEHUN-SUR-YEVRE, FRANCE..



Class U F 543

Book M 4 B 7







## ORDNANCE REPAIR SHOPS

A. P. O. 741

COL. C. M. WESSON, Commanding Officer  
LT. COL. A. G. GILLESPIE, Military Dept.  
LT. COL. A. B. HUBARD, Inspection Dept.  
LT. COL. W. W. DOE, Shops Dept.  
MAJ. G. S. BRADY, Administration Dept.  
MAJ. J. E. ERICSON, Salvage Dept.  
MAJ. O. V. DODGE, Stores Dept.  
CAPT. W. F. FRENCH, Adjutant

765

1018  
1253

# HISTORY

*of*

# Ordnance Repair Shops

## MEHUN-SUR-YEVRE, FRANCE

*Edited by*

MAJOR GEORGE S. BRADY

A history of the construction and operation of the  
Base Ordnance Repair Plant and Storehouses  
at Mehun-sur-Yevre and the story of  
the organization and distribution  
of the Ordnance personnel  
of the A. E. F.

ILLUSTRATED

PRINTED AT GOVERNMENT SHOP BY ORDNANCE TROOPS  
MEHUN-SUR-YEVRE, FRANCE

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# HISTORY OF ORDNANCE REPAIR SHOPS

## CHAPTER I

### GENERAL DESCRIPTION

THE ORDNANCE REPAIR SHOPS, Camp U. S. Troops, A. P. O. 741, known as Atelier de Mehun-sur-Yevre, are located at the village of Beauvoir, near the town of Mehun (Cher) on the main line of the P. & O. R. R., which was the main line of communication for the A. E. F.

The total area covered by these shops is twenty-two acres, there being in all thirteen buildings, eight large shops, and five smaller buildings. All of the buildings, with the exception of the Laundry, are of steel frame construction with corrugated iron siding and roofs, the roofs being covered with Rubberoid. Six of the eight larger buildings are of the modern monitor type structure, bolted together instead of riveted, in order that, should the occasion arise, the buildings could be taken down and moved within a short time. The Laundry is of frame construction covered with corrugated iron. The floors of all buildings are of firmly packed earth, with the exception of the Administration Building and the Laundry, both of these having concrete floors.

There is approximately one hundred and thirty acres of parking area, all of which has been used to park temporarily enemy and allied caissons, limbers, guns, salvage and various other material which could not be conveniently housed.

#### *Buildings*

Gun Shops Nos. 1 and 2 have a total floor space of 294,000 sq. ft., Gun Shop No. 1 is equipped with five ten-ton cranes and one fifteen-ton

crane, and Gun Shop No. 2 has seven ten-ton cranes. Some machinery had been installed in Gun Shop No. 1, but a portion of this shop is still incomplete, the structural material necessary for its completion having been lost on a torpedoed ship, and although the material was replaced, the armistice had stopped all construction work before it could be erected.

The Reamer Shop is located between Gun Shops No. 1 and 2, and has a floor space of 43,200 sq. ft. A few lathes and grinders were installed, but were never put into operation. In addition, two sub-stations are located in this building, one containing two motor generator sets complete while the other has only a switchboard in for direct current.

The Artillery Repair Shop has a floor space of 113,000 sq. feet, over one-half of which is occupied by machinery. Nearly all the machines which were to have been installed in this building have been placed, and have been in operation. Approximately two hundred machines are installed and range from the largest and heaviest lathes, planers, boring mills, shapers, millers and gear cutters, down to the finest precision machines. This shop is also equipped with four ten-ton cranes, two of which operate

in one bay, to facilitate the handling of extra heavy work.

The Small Arms Shop has a floor space of 120,000 sq. ft., approximately one-fourth of which is used by the Optical Repair Division. No machines are installed in this Division, only work-benches and tables being necessary to do the work. However, the Shop has sufficient equipment to take care of the tearing down, pickling, polishing and greasing of small arms. This equipment includes four large steam boilers, several batteries of buffers, a battery of sand blasts and a large number of pickling vats. A gravity roller system is used throughout to handle the work.

The Forge and Foundry Shop has a floor space of 39,200 sq. ft. This shop has twelve furnaces, three hammers, two drill presses and a few other miscellaneous machines installed.

The Woodworking Shop has a floor space of 64,000 sq. feet. This shop has nearly all of the machinery installed, as originally planned, and has been operating continuously since the installation.

Warehouses Nos. 3 and 4 have a total floor space of 240,000 sq. ft., Warehouse No. 4 having sufficient shelving space to take care of an enormous quantity of supplies. The Administration Building covers an area of 10,400 sq. ft., and contains the offices of five of

the Departments of the camp. It also houses the drafting room and a completely equipped printing shop.

The Laundry, covering an area of 1920 sq. ft., was originally built as a bath house for use of the soldiers



A CORNER OF THE ORDNANCE REPAIR SHOPS

employed in the plant, but is now equipped with one complete set of American laundry machinery of the latest type, and takes care of the washing for all the men in camp.

One other steel building, having a floor area of 1,600 sq. ft., is used by the plant Construction and Maintenance Division as a combined Plumbing, Tinning and Paint Shop.

#### *Organization*

The Camp is divided into six Departments: Military, Administration, Shops, Supply, Inspection and Salvage, each a complete unit in itself, but all harmonizing into one complete organization.

The Military Department takes care of the housing, messing, clothing and entertainment of the men of the camp, and keeps all military records.

The Administration Department acts as the auxiliary unit for the entire plant, and is charged with the maintenance of facilities and records for the co-ordination of the other Departments. It is composed of six Divisions: File and Record, Engineering, Shops Personnel, Trucking, Motor Transportation and Laundry. The File and Records Division maintains general files, a mail control

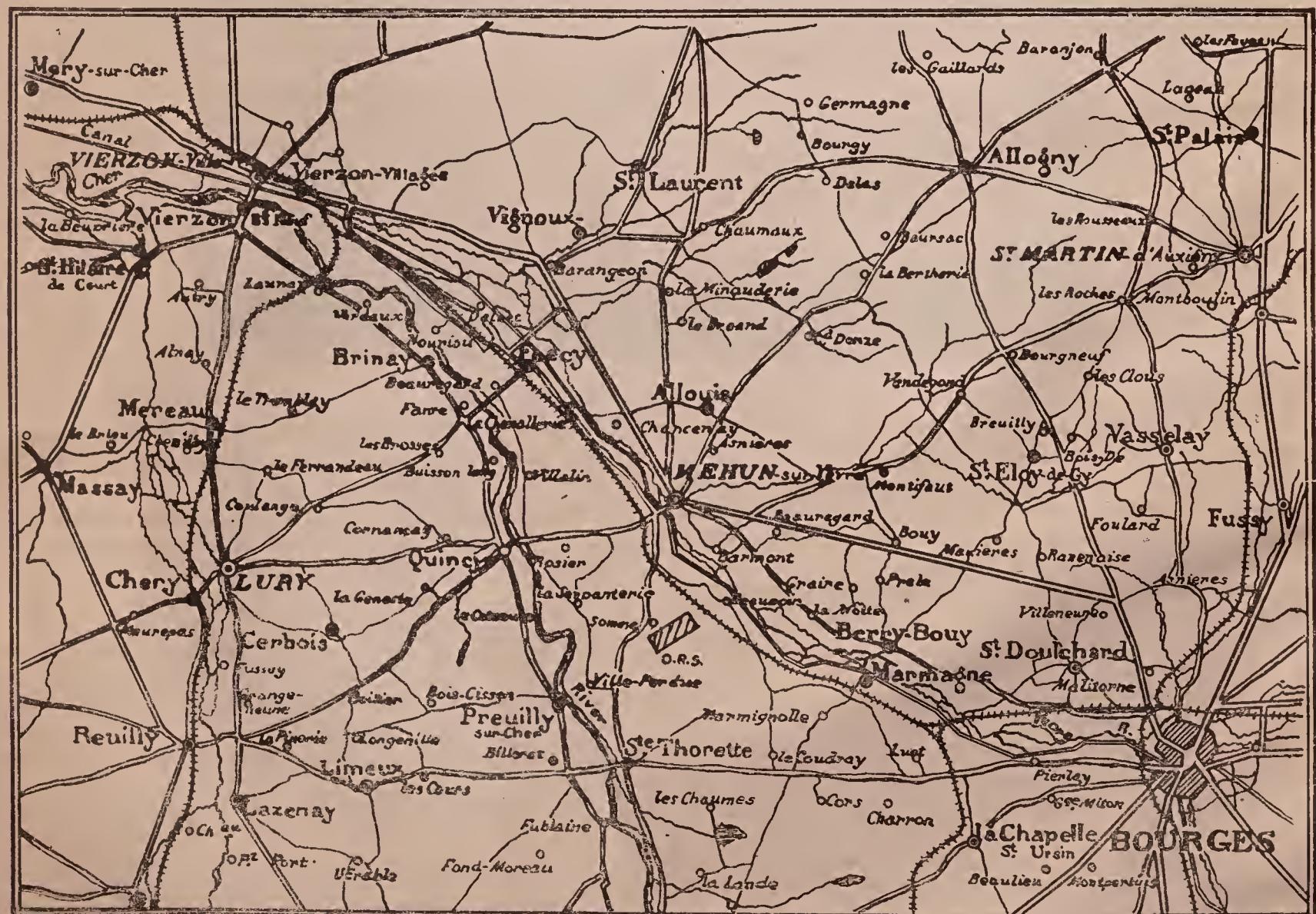


ENEMY ARTILLERY PARKED AT THE ORDNANCE REPAIR SHOPS

and distribution system, and a messenger service. The Engineering Division plans and authorizes all work, keeps records of its progress, makes all drawings and blueprints, and also has attached to it a complete printing establishment. The Shops Personnel Division oversees the requirements and distribution of the personnel, keeps a record of each man, and takes charge of all other personnel questions. The Trucking and Motor Transportation Divisions maintain transportation, the former within the plant, and the latter outside the plant.

The Shops Department is in charge of cleaning, repairing and preparing for shipment all material arriving at this Post, and of

the manufacture of any new material. It is made up of six Divisions: Artillery Repair, Small Arms and Machine Gun, Woodworking, Optical Repair, Construction and Maintenance, and Electrical, each of which are further divided into sections. The Artillery Repair Division handles all artillery, the sizes ranging from 340 mm. to 37 mm., and in addition takes charge of all battery equipment and artillery accessories. The Machine Shop also comes under its head. The Small Arms and Machine Gun Division overhauls, repairs, crates, and prepares for shipment all machine guns, rifles, pistols and revolvers, all hand arms, and small arms accessories. The Woodworking Division manufactures

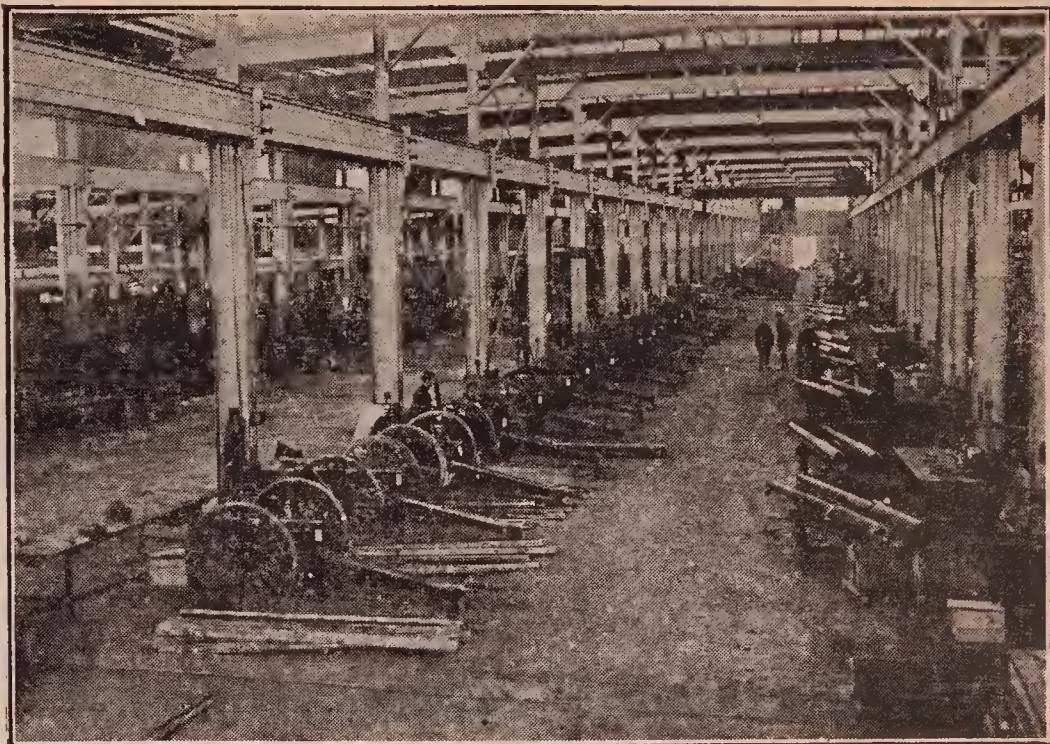


MAP OF THE COUNTRY SURROUNDING THE ORDNANCE REPAIR SHOPS

the crates and boxes for the shipment of all material, and any other woodworking material as called upon. The Optical Repair Division is charged with the preservation, repairing and shipment of all fire control and optical instruments. The Construction and Maintenance and Electrical Divisions are auxiliary in their nature, the first in charge of the upkeep of the plant, and any new construction which may be necessary, while the latter installs and maintains all electrical equipment including the telephone system.

The Supply Department is charged not only with supplying this plant with working materials, but also the maintenance of records of all material received and shipped, all storage facilities, property accountability, and acts as one of the General Ordnance Supply Depots for the A. E. F. The Transportation Division of this department oversees all yard operations, and takes charge of checking.

The Inspection Department inspects and recommends all necessary repairs on all material, and is responsible for the proper condition of all material before shipment. It is made up of an Artillery Inspection Division, a Small Arms Inspection Division, and a Reports Division. This latter Division keeps a complete record of the condition of each gun passing through the plant, and makes a report of all enemy material received and the special features of each.



OVERHAULING AMERICAN ARTILLERY

The Salvage Department takes charge of the reclamation and disposition of all salvaged material. This includes selling, destroying, shipping and otherwise disposing of the large quantity of salvage received from the front.

## CHAPTER II

### HISTORY

THE provision of Ordnance repair facilities for the American Forces in France was the purpose contemplated by the Chief of Ordnance in Office Order No. 47, which established the Divisions of American Ordnance Base Depot in France. Col. D. M. King was relieved from duty at Rock Island Arsenal in July, 1917, and ordered to Washington to take charge of the project, and directed to proceed with the design and procurement of the necessary buildings, machinery and equipment, and to secure the personnel required for operating the various shops and establishments then proposed. It had been learned through the French High Commission that existing shops or facilities would not be sufficient for the repair of the Ordnance material for the

American Expeditionary Forces in very great quantities.

Steps were at once taken to assemble the required commissioned personnel, and, in order to expedite the design and purchase of material, contracts were negotiated early in August with the firm of Stone & Webster, of Boston. They at once opened offices in the building occupied by the Division of American Ordnance Base Depot in France, and the preliminary work which the undertaking involved was promptly begun.

The project, at its inception, contemplated the erection, at a point then undetermined, of a complete Ordnance establishment, which would combine at one center, repair and warehousing facilities, approximately thirty-eight buildings, estimated to cost in the neighborhood of twenty-five million dollars when erected and equipped. As soon as the tentative plans were completed three officers were dispatched to France, September, 1917, with instructions to submit the project to the Commander-in-Chief, and to return as promptly as possible with the information required to complete that part of the work that must of necessity be done in the United States. In the meantime, the procurement of the buildings, machinery, equipment and materials was actively under way. The organization was being perfected, and the commissioned personnel was being carefully selected and assembled. On October 22, 1917, the first shipment of material was made from the United States, consisting of one steel warehouse.

By November, 1917, plans were well under way, and a good idea existed of the personnel which would be required to run the plants as projected. A large number of officers had been selected and assigned for duty with the Division. Schools were



OVERHAULING GERMAN ARTILLERY, GUN SHOP No. 2

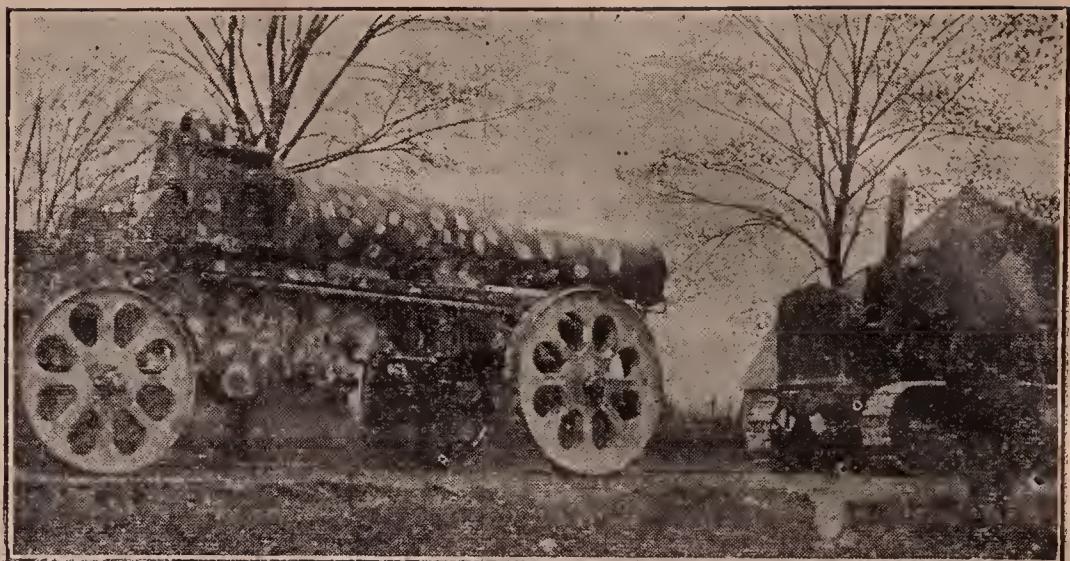
## HISTORY OF ORDNANCE REPAIR SHOPS

started at Rock Island, Watervliet and Frankford Arsenals to familiarize all these reserve officers with artillery and arsenal methods. It developed that enlisted personnel would not be available from other sources, and officers were sent out to various parts of the country for the purpose of recruiting men of mechanical training. About 9,000 men were enlisted in the Ordnance Department for this Division during the months of November and December. As many of these men as possible were sent to the Arsenal Schools. The remaining men were sent to camps where accommodations could be found for them.

The work of design was practically completed, and the plant when completed was expected to consist of the following buildings :

1 Carriage Assembly Shop	240x500 ft.
1 Carriage Machine Shop	226x500 "
1 Woodworking Shop	200x320 ft.
1 Forge and Foundry	160x245 "
2 Gun Shops, each	245x600 "
1 Reamer Shop	182x240 "
1 Tractor Shop	245x620 "
1 Tractor Shop	122x580 "
1 Tank Repair Shop	245x620 "
1 Small Arms Shop	240x600 "
6 Warehouses	240x500 "

About fifty orders for building materials, totalling about \$3,500,000 had been placed.



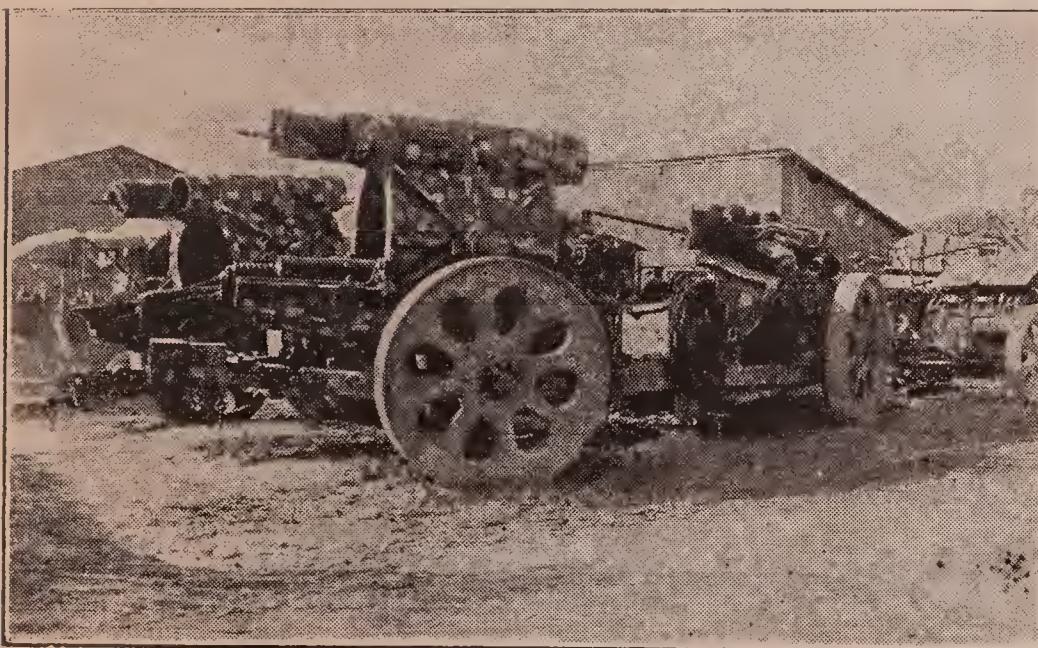
42-CM. GERMAN HOWITZER ON TRANSPORT WAGON

The mechanical layouts required forty-two 50 H. P. oil engines and six 100 H. P. oil engines of the Semi-Deisel type for power and light, forty travelling electric cranes in the machine shops, 220 jib cranes, 350 I-beam trolleys and 400 small hoists. Ten miles of track, 400 cars and 200 turn tables were to be used for the industrial railways in the storehouses. About seventy-five mechanical orders involving about \$1,100,000 had been placed.

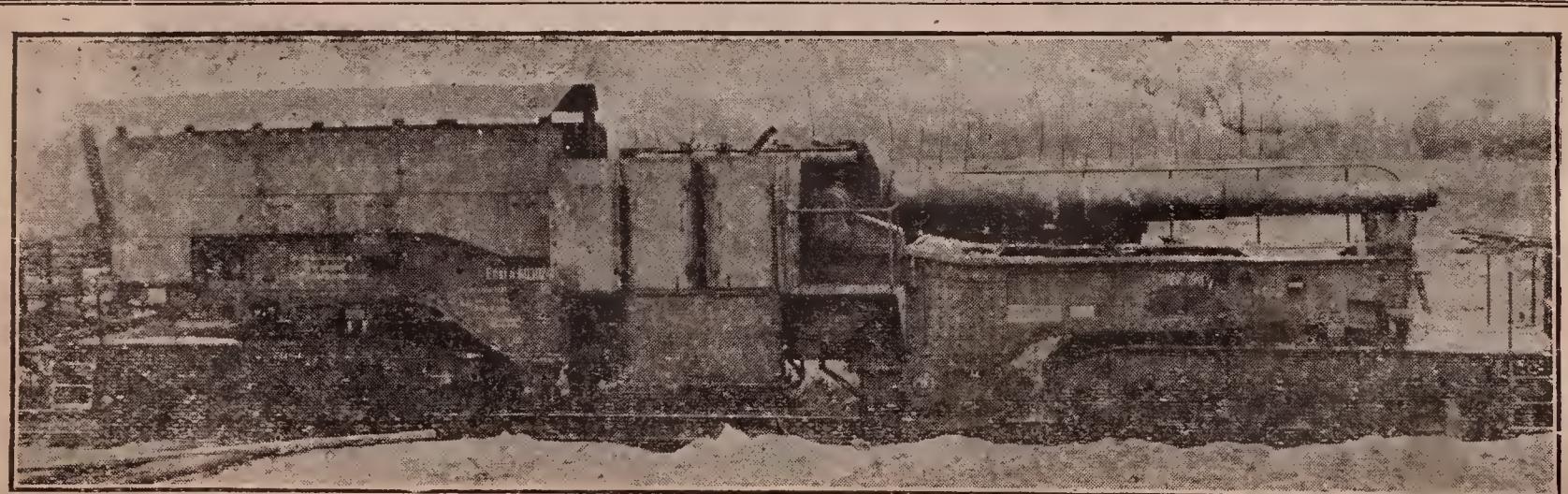
The machinery and equipment consisted of about 1,800 machine tools of which about 98 per cent. had been ordered by January, 1918, on 350 orders amounting to about \$4,500,000.

In addition, about 1,700 orders for material and construction equipment had been placed amounting to about \$10,500,000. These orders constituted about 90 per cent. of all the buildings, machinery, equipment, etc., and this material was reaching the port well in advance of the capacity for shipment overseas. By December 18, 1917, ninety days after the first order was placed, 15,000 tons of the 24,000 tons of structural steel ordered up to that time had been delivered at the seaboard. Representatives of Stone & Webster had then been in France several months to arrange for the receipt and care of material on arrival, and to prepare for the active prosecution of the construction work, which, however, they were only permitted to supervise, as all construction work was taken over by the Engineer Corps.

Colonel King, accompanied by a group of 35 officers, sailed for France on February 18, 1918, with the intention of actively undertaking the erection of the shops and equipment then arriving.



RECOIL MECHANISM FOR 42-CM. GERMAN HOWITZER ON TRANSPORT WAGON



21-CM. GERMAN RAILWAY MOUNT, OVERHAULED AT THE ORDNANCE REPAIR SHOPS AND SENT TO THE UNITED STATES

He left in the United States a sufficient organization to complete the work of purchase and shipment. There had already sailed as much of the enlisted personnel as it was possible to dispatch under the A. E. F. program, and other units were organized and awaiting the priority schedule for the shipment of troops.

#### Construction Begins

Plant A, located at Is-sur-Tille, having been begun during the winter of '17-'18, and the location of Plant B, having been secured at Mehun, the first material arrived here on January 28th, 1918, consisting of 8 carloads, coming from St. Nazaire.

On January 30th, 1918, three Stone & Webster construction men arrived in camp at Beauvoir, near Mehun-sur-Yvre, to start work on "Plant B" of the original American Ordnance Base Depot project. Capt. H. Austill with Company D, 501st Engineers, had already started work on laying track and had laid about 600 feet. The first material was unloaded from the cars from the main line of the railroad.

The French track gang connected the yards to the main line of railroad on February 15th. Warehouse No. 1 was staked out on February 16th. Thirty-seven cars of material had arrived and were unloaded up to this date. On February 27th, Captain Austill turned over twenty-five enlisted men to the Stone & Webster engineers, and they were placed at work on the excavation of Warehouse No. 4. Five hundred Chinamen arrived in camp on February 28th, and began on March 2nd the excavation for the foundation for Gun Shop No. 2. Major Fin nell, of the 501st Engineers, arrived at the camp on March 1st, and took charge of operations. Lieut.-Colonels Ricker and Fulton, Ordnance officers, arrived on March 1st, but the camp remained in charge of the Engineers.

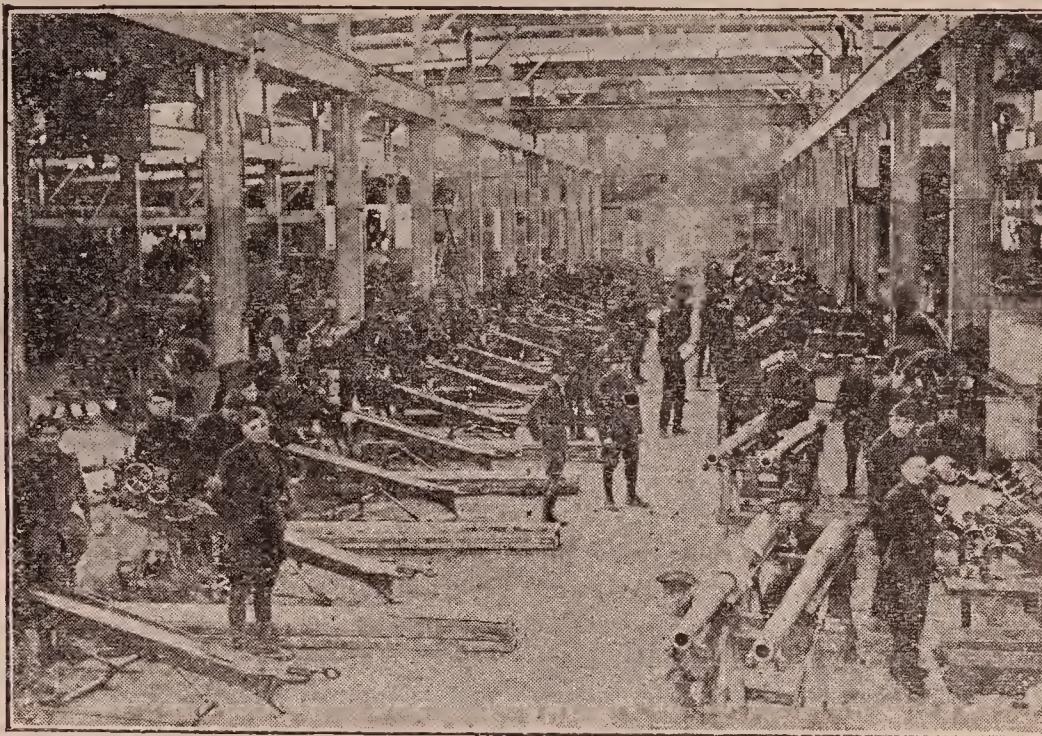
On March 30th, the concrete foundations for Warehouse No. 4 were completed and those for the Carriage Assembly Shop were about half finished. The excavation for Gun Shop No. 1 was complete and the erection of the steel for Warehouse No. 4 was started. An Ordnance officer was placed in charge of this work.

A steam shovel was operating at this time, and approximately 400 men were engaged in the work of building the plant, a large number of these men, however, were being used to unload cars because of the fact that material was arriving faster than it could be conveniently handled, especially a large amount of machinery which was not to be installed until the erection had been completed.

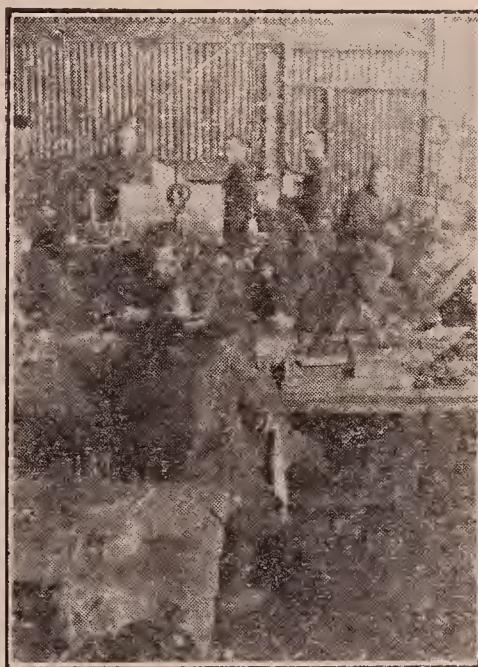
Two hundred and fifty Ordnance men, Company C, Second Battalion, arrived on April 13th and were put to work on construction.

On April 27th, all the sheet iron work on Warehouse No. 4 had been completed and during the following week so much of the interior grading had been done that the Ordnance men began the storage of material in it. At this time there were about 600 men employed on the work, 225 Ordnance men, 75 Engineers and Labor troops and about 300 Chinamen.

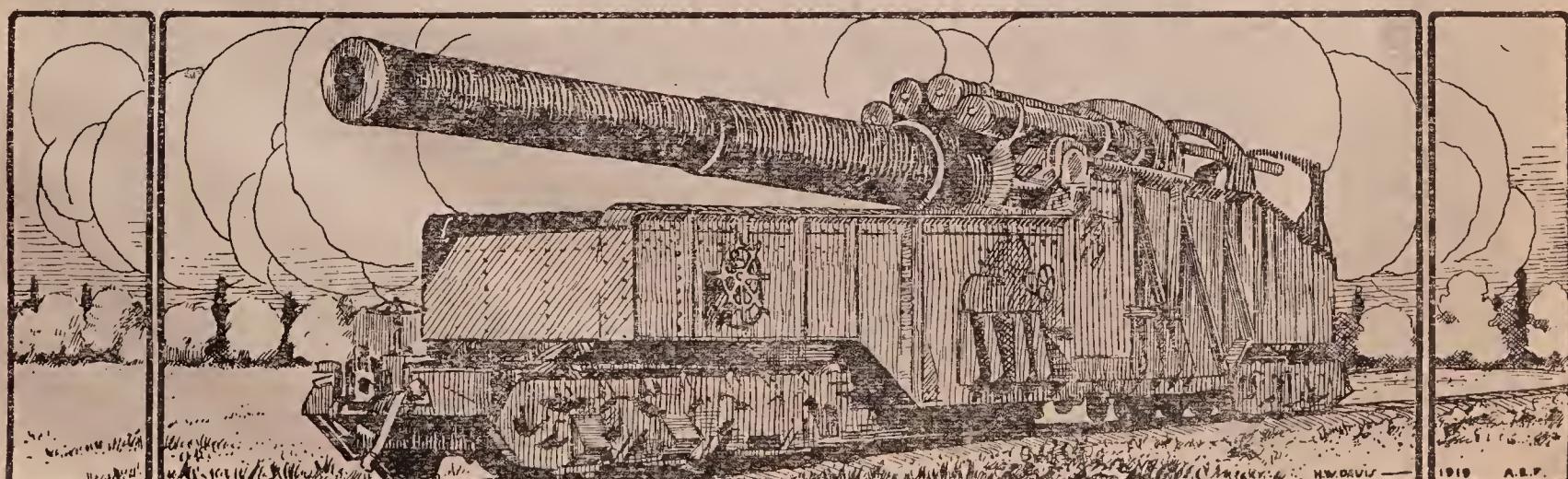
The filing of orders for Ordnance material for other points in France was begun early in April. About April 12th, Lieut.-Col. Ricker was relieved from duty at the camp and Lieut.-Col. Fulton was placed in charge of the Ordnance Detachment. About April 25th, two Ordnance men were put to work on storehouse records and six men checking in the yards. April 30th Capt. J. E. Ericson took charge of the organization of a receiving and shipping storehouse. It was found that a large number of items which had been ordered for the Base Depot work had not been included in the



OVERHAULING 75-MM. GUNS AT THE ORDNANCE REPAIR SHOPS



REPAIRING OPTICAL INSTRUMENTS



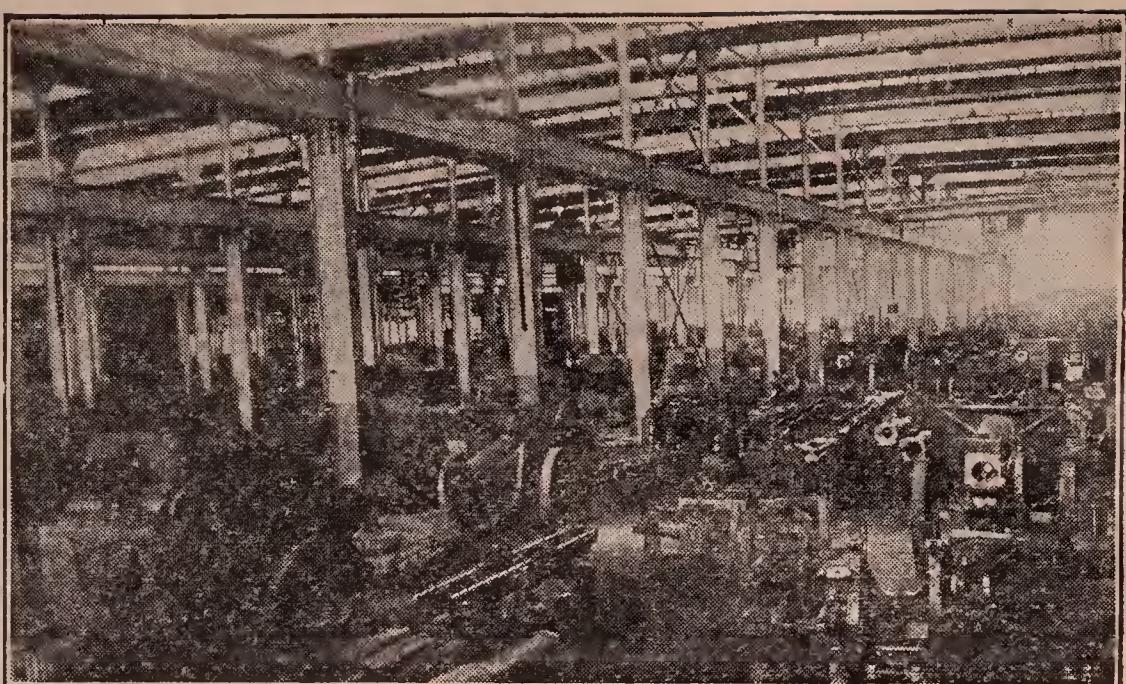
U. S. ARMY 14-IN. RAILWAY GUN, BUILT AT WATERTOWN ARSENAL, WEIGHT OVER 500 TONS

## HISTORY OF ORDNANCE REPAIR SHOPS

Ordnance Supply Tables, and as urgent demands for this material came in from the more advanced repair shops, and M. O. R. S. organizations, it was found that this material could be obtained from these shops only, and thus a large amount of material was diverted to fill this demand. A system was organized for taking care of the large quantity of machinery, tools, and equipment which was arriving daily. The task of unloading this material without the proper equipment was a big one, so a Bucyrus Steam Shovel was rigged up as a locomotive crane. A little later, when a fifteen-ton locomotive crane arrived and was erected, the labor engaged in this work was greatly relieved.

The work of storing and protecting the incoming material was carried out under very adverse conditions. There were no roads, the railroad tracks were in a deplorable state, due to the mud and lack of ballast. As a result practically all incoming freight had been unloaded wherever the cars could be spotted with the least danger of being derailed, and was scattered over acres of ground.

The task to be accomplished was to gather the material from along the tracks and store it systematically and in such a manner that it could be easily located in order to satisfy the increasing demand for shipment to advanced shops which were in operation and badly in need of various tools and raw material. All the boxes were plainly marked with purchase order number, the package number, weight, cubic contents and manufacturer's or shipper's name, all for the purpose of identification, but as no order lists or package lists were available at first, it was necessary to open every lot. Material was shipped daily by freight, express and trucks and it was found very difficult to fill orders



OVERHAULING 155-MM. HOWITZERS AT THE ORDNANCE REPAIR SHOPS

promptly when they constituted less than a carload, as the French railroad authorities demanded that the cars be loaded to capacity. In spite of these difficulties, twenty-five machine shops at various places were equipped and furnished raw material from these stores and much raw material and tool equipment was furnished to the Mobile Ordnance Repair Shops.

*Concentration Camp Formed*

On May 20th, 180 enlisted men of the Signal Corps arrived in the Camp; and on May 25th, 750 men of the 318th Engineers arrived. One hundred and fifty of the Chinese workmen were withdrawn at this time. On June 1st the number of men in the camp totaled about 1,600. About the end of May Lieut.-Colonel A. V. Maish conceived the idea of having all Ordnance men, except those



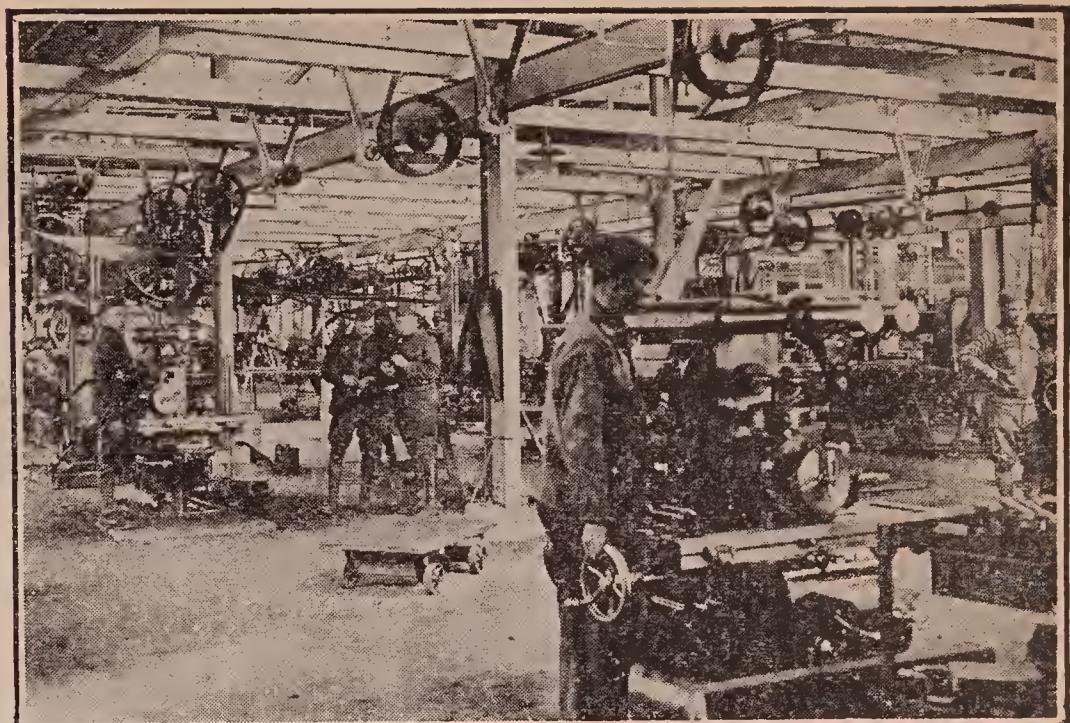
CHINESE DISMANTLING RIFLES IN SMALL ARMS SHOP

actually with army units, sent to this camp from the ports for classification and distribution to points where needed. It was hoped that by making the camp a distribution point, the services of the men could be utilized on the construction work while they were waiting classification and assignment. Under this arrangement the 3rd Ordnance Battalion of 650 men arrived in camp on June 15th. They were quartered in Warehouse No. 4, which was then roofed over, and they were placed at work on the steel construction, and on the unboxing and cleaning of machinery.

During the month of July, Ordnance Depot Companies, 22, 23 and 24, and the 4th Battalion, totaling in all about 1,100 men arrived on the post. All these men were interviewed and catalogued according to trade qualifications, and orders from the office of the Chief Ordnance Officer for tradesmen for Ordnance Shops and the field armies were filled from this personnel.

Considerable extra work was realized from this plan of a classification camp, but it was found to have many drawbacks. Men were withdrawn from the construction work for transfer with only a day's notice, thus breaking up work gangs. Usually the best men were picked to fill orders, resulting very often in the gang bosses and skilled mechanics being taken from the work, making organization of work very difficult. This matter was brought to a head in August, when the 27th Depot Company arrived followed by orders for more men than the Company contained, and Depot Companies 32 to 39 with about 1,800 men followed at once by orders for 1,500 men for immediate shipment, so great was the need for Ordnance men at the front.

During this month of August about 2,000 Ordnance men arrived at the Post while orders were filled for 2,279, usually in small lots of less than fifteen. Request was made to the Chief Ordnance



ONE OF THE MACHINE BAYS IN THE ARTILLERY REPAIR SHOP

Officer to allot enough men for a permanent force at the Shops to take care of the supply and messing of these large number of transient men, and to provide enough skilled tradesmen to maintain a skeleton organization on the Post. This request was granted, and approximately 900 men were set aside for this purpose. These were formed into three companies: a Headquarters Company of 400 men, a Mechanics Company of 450 men, and a skeleton organization of a Casual company. This latter was to receive the casuals of the provisional companies arriving from the States and being broken up here. Later two more casual companies were formed.

During June the work of erecting steel, and of roofing the Carriage Assembly Shop was being done by Ordnance enlisted men under the supervision of Ordnance Officers. The erection of Gun



FRENCH GIRLS PACKING RIFLE PARTS FOR SHIPMENT TO THE UNITED STATES

Shop No. 1 was being done by some of the 501st Engineers in charge of an Ordnance Officer. Most of the Engineers, including the Chinese attached were employed almost continuously on the roads and railroad tracks.

The Ordnance personnel consisted of the skilled mechanics enlisted by the Ordnance Base Depot Division in November and December, 1917. However, about the 1st of June one company of the 38th Engineers, electricians, and one battalion of the 318th Engineers, construction men, arrived and did excellent work. The 318th Engineers remained in camp only five weeks. A Negro labor battalion of the 525th Engineers arrived about the 1st of August. Some of these Negroes were put to work on the roofing under the supervision of Ordnance officers. Nearly all of the skilled labor, including most of that used on the power line to Bourges, was furnished from the Ordnance companies.

#### *Machines and Equipment Installed*

The original project for the American Ordnance Base Depot, called for about 1,800 machines of all kinds. These were for "Plant A" at Is-Sur-Tille, "Plant B" at Mehun, and for the various smaller shops at other points in France. The first machines arrived at the Mehun Plant during the last week in March. In June a small temporary machine shop was started to take care of the needs of the construction men, but the permanent buildings were not ready for any machinery installation until the middle of July. By that time many of the machines had been reshipped to other points, but before the Armistice had been signed over 400 machines of all kinds had been set up and placed in service. At that time five well equipped shops were in operation.

About the middle of July the work of setting up the machinery and shafting in the Carriage Machine Shop was begun. The lumber taken from the boxes was used to build the forms for the



THE ORDNANCE BAND

concrete foundations. The stringers for the overhead shafting were made from railroad ties. In spite of the shortage of cement, and the great handicap of constantly shifting personnel, there was installed ready for operation before Sept. 1st, approximately 130 machines, and 30 more were in the shop being set up. All the overhead line shafting was complete. As the electric power from Bourges could not be obtained for at least another month, it was decided to install oil engines. The shop was divided into four sections, each of which was furnished with a 50 H. P. Bessemer Oil Engine. These were ready to run on Sept. 15th. Production work was immediately started, several repair jobs were done and some tools made. The first official order from Ordnance Headquarters was for a magneto gear, which was placed in the Machine

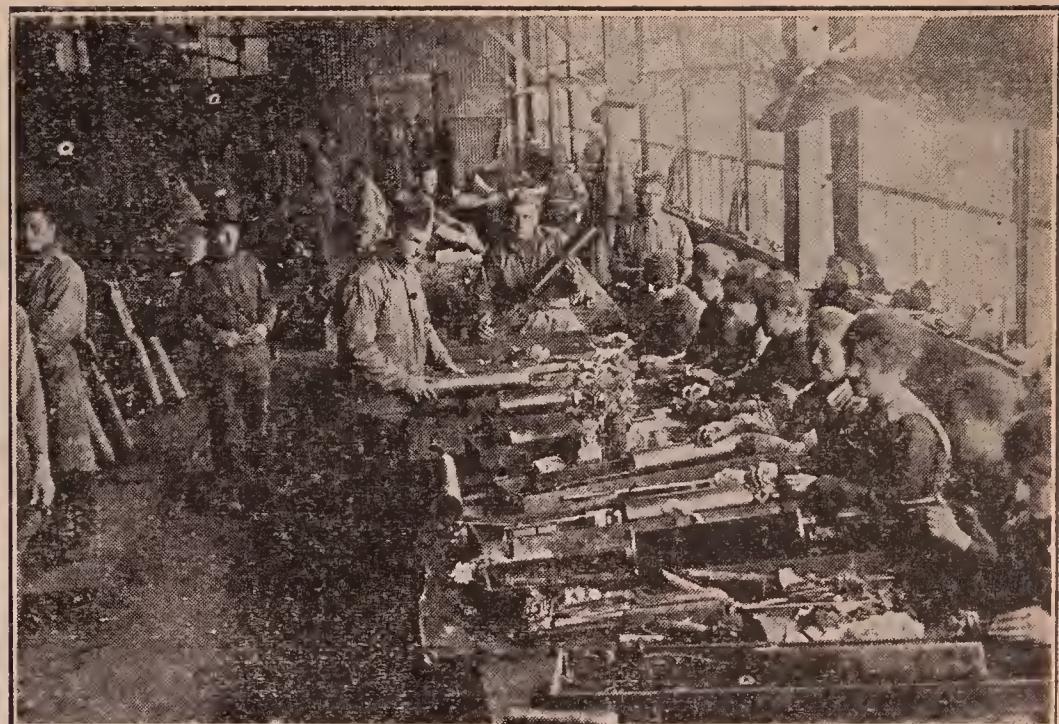


LOADING SALVAGED SHELL CASES FOR SHIPMENT

Shop on September 24th. Up to November 11th there were sixty-nine machines installed in the Wood Shop and ninety-three men were employed. This shop was then taking care of all the camp and plant carpenter work except erecting barracks, was making and repairing small arms boxes, and had begun production work on orders from Ordnance Headquarters.

During the month of August the Carriage Assembly Shop was being used partly to quarter Ordnance Troops and partly for the unboxing and storage of machine tools. On Sept. 7th, it was determined to use seven bays, approximately 34,000 sq. ft., for the repair of small arms. The space had to be cleared of machinery and graded. No lumber was available for work benches other than that salvaged from the machine tool boxes. It was found that a great deal of the equipment which had been ordered for the Small Arms Shop had either not arrived or had been shipped to other shops in France. Part of the Parkerizing Plant for the bluing of the rifle parts had gone to Is-sur-Tille and most of the acids had been shipped to that plant. On the 14th of October actual production work had been started with 58 men dismantling rifles and preparing the rifle parts for cleaning and bluing. Spare parts for the model 1903 rifle were received from Gievres in such quantities that assembling of these rifles was begun about the 20th of October. Up to November 11th, or less than a month from the start of the work, a total of 39,000 rifles and 122 Browning Machine Guns had been repaired or assembled and shipped. The force had by this time increased to 320 men.

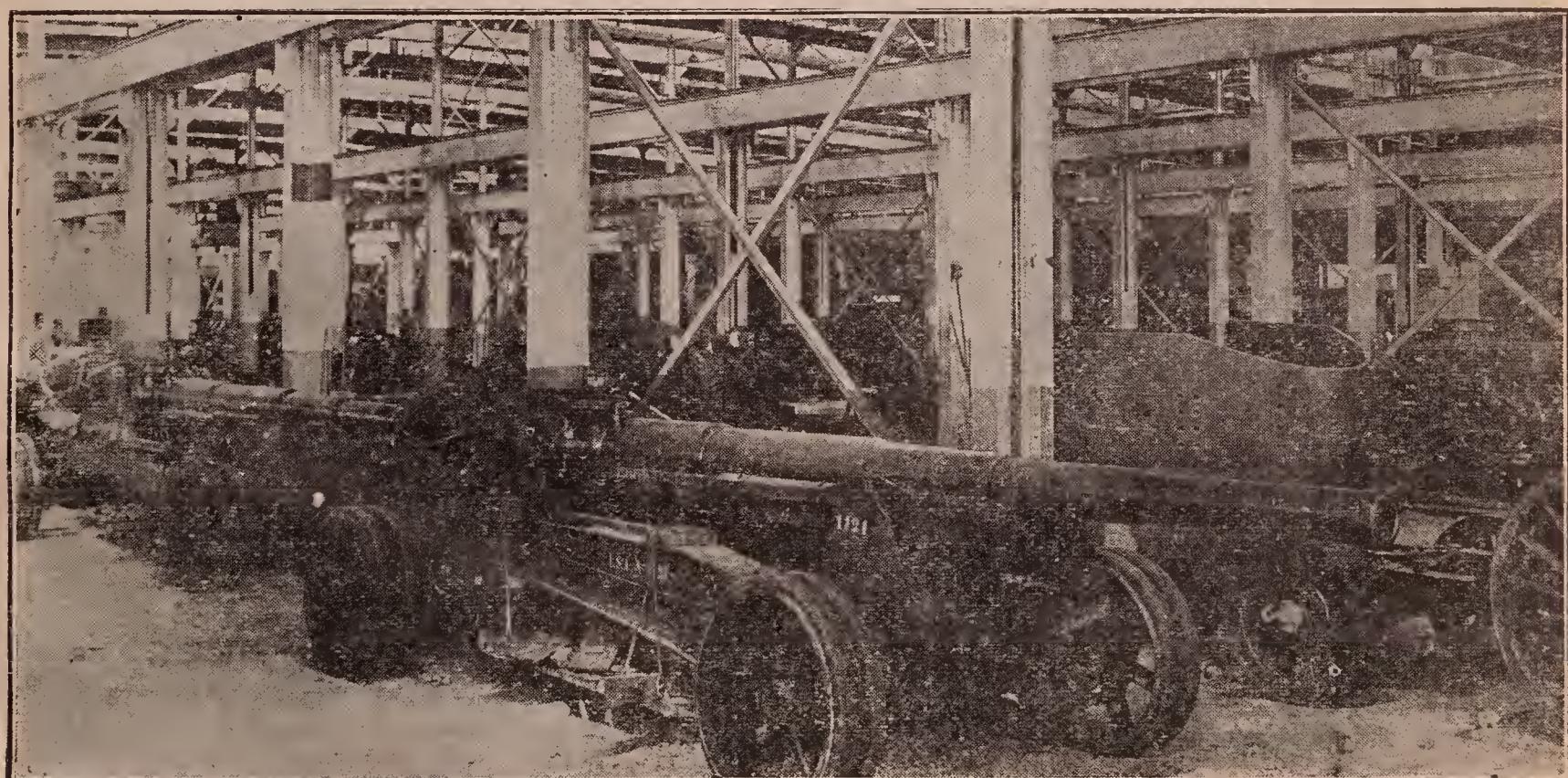
The first week in September work was started on the installation of machinery in the Forge and Foundry. Lack of cement halted work on the cupola, but the work of installation of Forge Shop machinery progressed until the signing of the Armistice. As soon as some hand forges were set up early in October, production work was started, and during this month all the forging was done for fifty complete sets of mobile shop tools for repair of 75 and 155 mm. guns. These tools included some heavy forged steel wrenches. The



FRENCH WOMEN CLEANING MACHINE GUNS FOR SHIPMENT TO THE UNITED STATES

hardening of lathe and planer tools for the machine shop and considerable case hardening was done from the beginning. By the 1st of November thirteen oil burning furnaces and seven coal forges had been set up and put into use. Fifteen other machines, including two 200-pound Bradley Helve Hammers and a 2000-pound Chambersburg Steam Hammer had been set up ready for operation.

Electric installation was begun about the first of June by a company of the 38th Engineers. Capt. Kutz arrived at that time with about seventy men, and shortly after brought the remainder of his company. In addition, about thirty Ordnance electricians were assigned to assist him in the interior wiring for power and lighting. About the middle of August, by an agreement with the French, work was begun on the power line to Bourges. Linemen from the 38th Engineers with about fifteen electricians and a French interpreter from the Ordnance, went to work on this line, and aided the French at the Bourges Power Plant. The Plant and transmission lines were ready about the 1st of October and the power was turned on October 7th. No 30,000 volt insulators were

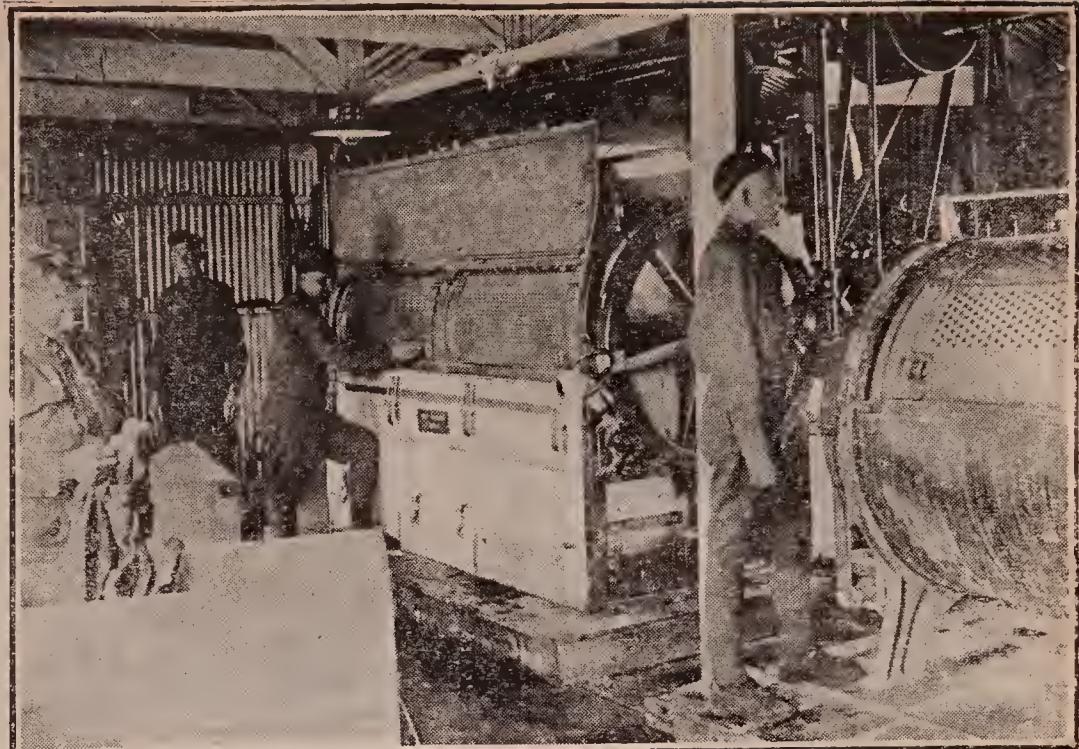


155-MM. G. P. F. GUN — 10 OF THESE WERE OVERHAULED AT THE ORDNANCE REPAIR SHOPS

available when the line was built, and those installed were for 16,000 volts. The line is being operated at the generating voltage of 5,250. The voltage required at the shops is 440 for motors and 220 for lighting. Before the 1st of November an Electrical Division was organized of Ordnance Officers and enlisted men to take care of the power, lighting and telephones of the entire camp.

The railroad tracks in the shop yards were laid down by the Engineers in the Spring with little, if any, grading or ballast. The soil of this section is a rich loam with a high percentage of lime. Any slight rain produces a pasty mud to a depth of several inches. As a consequence of this, the unballasted track was constantly sinking, spreading and shifting, and locomotives and cars were off the track almost daily. As the tracks became absolutely unusable, they would be repaired by the Engineers. The truck road from the shops to the camp was built by making two furrows with the scraper and piling the soft earth in the middle. This was an impassable trough of mud after each rain, and much labor was wasted in trying to keep it in repair. In September Lieut.-Colonel Finnell, of the 501st Engineers, then in command of the camp, set a company of infantrymen on the grading of the old Roman road which ran from Gun Shop No. 1 in a direction parallel to the camp, meeting an old farm lane which ran in the direction of the camp. This route nearly doubled the distance from the shops to the camp, and was never used by anyone going to the plant. It was abandoned after nearly two months labor had been spent on it.

When the Armistice was signed on November 11th, five shops and two complete and distinct warehouses were in operation. The number of men actually employed in the shops and warehouses totalled 1,044 distributed as follows: Machine Shop 280, Forge Shop 135, Woodworking Shop 93, Small Arms Shop 320, Ordnance

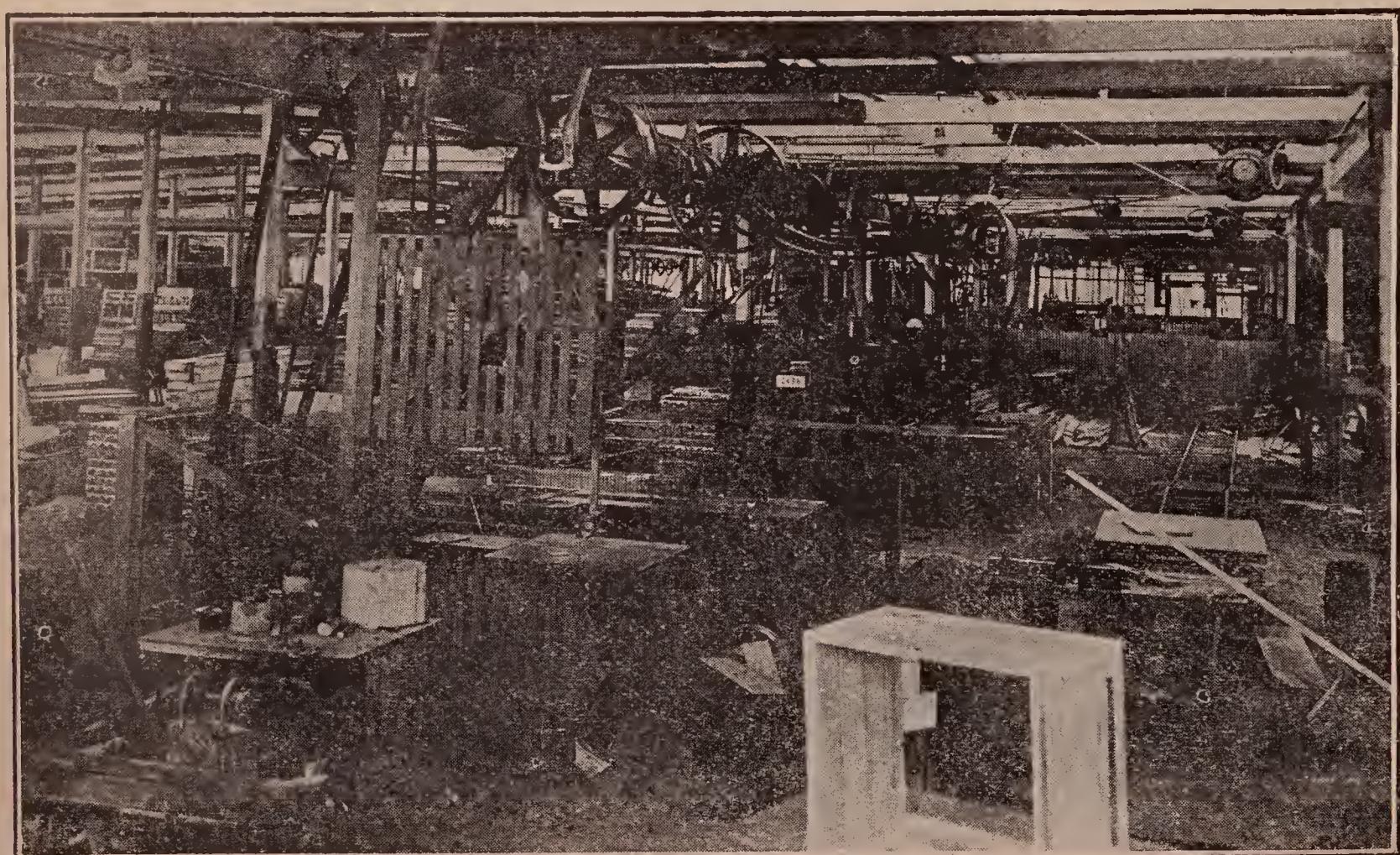


THE MACHINE ROOM OF THE CAMP LAUNDRY

Shop Warehouse 111, Mehun Supply Depot 60, Office and Drafting Room 45. Four hundred and thirty-eight machines were actually installed ready for operation in these shops. Since April, the Ordnance shop warehouse had been issuing steel and other raw materials to the Mobile Repair Shop units, to the advance shops, and camps throughout France. Machinery and general supplies originally ordered by the Ordnance Base Depot Division were being issued in the same manner. The shops were in operation and were ready to do any kind of machine or woodwork except the lining of heavy guns.

#### *Post Armistice Work*

After the signing of the Armistice there was a general cancellation of orders both from Ordnance Headquarters



VIEW OF ONE CORNER OF THE WOODWORKING SHOP — ORDNANCE REPAIR SHOPS

and of the gun work being undertaken for the French Arsenals. As in other A. E. F. camps, the work slowed down pending the establishment of the general Ordnance policy. Towards the end of November it was determined to send all artillery to Mehun for overhauling and reshipment to the States. Colonel C. M. Wesson arrived from Tours on November 23rd to take command of the camp.

A policy was decided upon with Ordnance Headquarters at Tours whereby all artillery would be overhauled here, but only the 75 mm. and smaller sizes would be crated. Instead of rebuilding it was decided to dismantle all unserviceable rifles, clean the parts, and pack them in boxes for shipment to the States. Lumber for crates and boxes began to arrive in quantities early in December.

The first incoming material from the Armies, which consisted of enemy and allied artillery, small arms and a large amount of salvage arrived December 6th. Following this shipment material arrived daily. As the cars could only be held twenty-four hours and because of the poor condition of the yard tracks, which were constantly sinking and spreading, it was necessary to unload the material wherever the cars happened to stand without regard to future accessibility and convenience. On some days as high as 130 cars were received, and often it was necessary to take many men from the shop work for the unloading of cars. The work was especially difficult due to the serious shortage of locomotive cranes, only one being available up to the latter part of April.

Some salvage was stored in the Forge and Foundry building, but a considerable amount of it was piled outside and protected as much as possible by tarpaulins. The salvage arrived unsorted, very expensive optical instruments sometimes being found among almost worthless small arms or other material. The climatic conditions were such that it rained for weeks at a time and the entire yard was an expanse of deep sticky mud, over which it was almost impossible to haul the artillery. Tractors were used to some extent but without roads the task of getting the artillery into the shop to be worked on was very slow and difficult. Because of these conditions many more men were used to handle the material than would otherwise have been necessary and the work was much slower as a consequence.

After the Armistice a general policy of no further construction



REVIEW OF TROOPS BY BRIG. GEN. RICE, CHIEF ORDNANCE OFFICER OF THE A. E. F.

work except that absolutely necessary was adopted. But in order to handle the heavy artillery, which had to be stored in the yards, it was necessary to build plank roads through the shops and extending into the yards to meet the road being built by the 525th Engineers from the camp to the shops.

There was no rock suitable for road construction in the vicinity and it was impossible to get it in any considerable quantities from the French because of shortage of transportation. Although there was sufficient sand at Gievres, it was unavailable for the same reason, and would have been of little value without a large amount of rock as foundation.

The only practical road which could be built in any reasonable time was one of planks. Before the Armistice no wood or railroad ties could be obtained for this purpose, but in December sufficient ties were released to the Engineer officer to build the mile of roadway required. This latter road, 18 feet wide, was built during the months of December and January.

Before its completion it

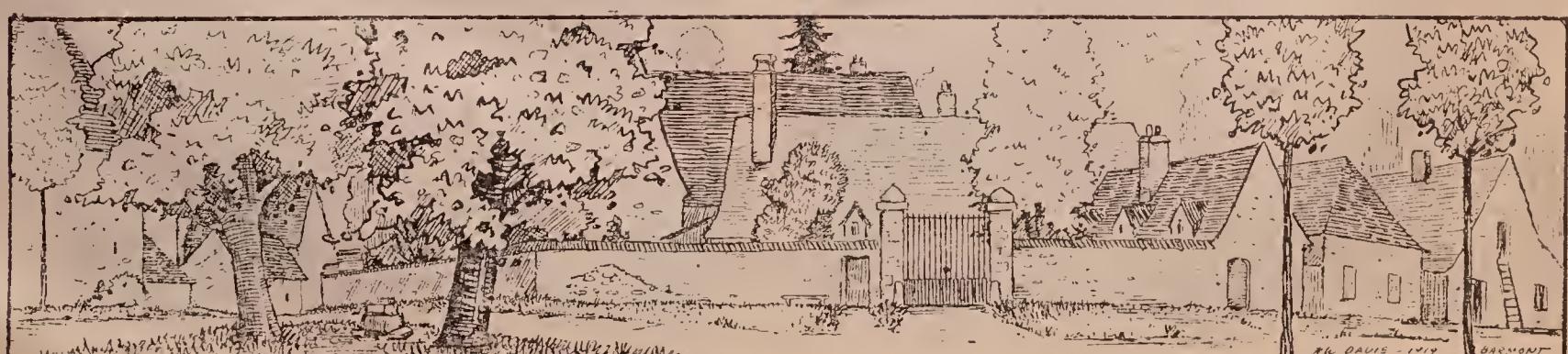
was impossible to get nearer than a half a mile of the shops with a truck on account of the deep mud.

The steel Administration Building, which was 75 per cent. complete on November 11th was finished in December and the offices of the Department heads were concentrated in it.

Early in December it was necessary to prepare a shop for overhauling and cleaning of artillery sights and fire control instruments. A space 60 by 80 feet was fitted up, and the work of saving the optical instruments and preventing further deterioration was begun



BRIG. GEN. RICE, CHIEF ORDNANCE OFFICER, ADDRESSING TROOPS AT MEHUN



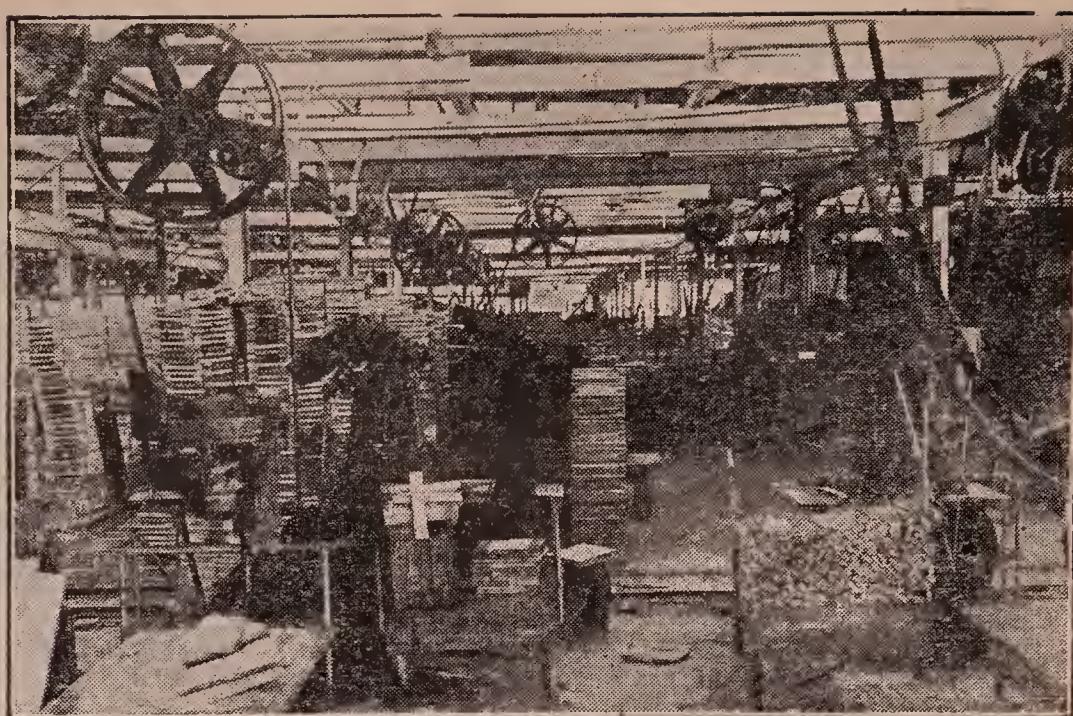
at once. On the shop construction and maintenance work a force of about 150 Ordnance men was kept. These included the millwrights, plumbers and tinners. For maintenance work in the camp a force of about 200 colored Ordnance men was employed. These men erected barracks, built sidewalks, fitted up miscellaneous buildings such as Hospital, K. of C., Y. M. C. A., camp bath house, delousing plant, and took care of all maintenance work in the camp.

One of the great problems that entered into the working of the shops was the changing personnel due to the operation of the evacuation camp. Ordnance men from the first and second armies and from other shops and depots in France were sent here for evacuation to the States after they had completed their work with their respective units. The men began to arrive here early in December. The first three evacuation companies were formed early in January. The men for these companies were selected by a system of rating devised by the Chief Ordnance Officer's Office. It was based on length of service, dependents and certain other qualifications. The percentages of all in the camp were found and those having the highest percentage were drawn. Forty-seven companies, containing a total of 4,936 men and 105 officers, have been made up and sent to the ports up to June 25th. It has placed a great handicap on the shop as it often occurs that the men selected were skilled men needed on special work. The men selected to convoy material to the United States are chosen from the same percentage list.

Production on artillery was rapid from the beginning, about 700 men being employed on 75 mm. guns. As many as eighty-five pieces were knocked down, cleaned and crated in a day. In all approximately 4,500 artillery pieces were cleaned, repaired, inspected and shipped, 2,700 being allied material and 1,800 being enemy. Twelve hundred and forty-seven

allied and 2,351 enemy caissons and limbers were overhauled, cleaned and shipped. The following is a list of the allied material handled up to June 1st:

37 mm. Guns.....	156
75 mm. Guns, French.....	1891
75 mm. Guns, British.....	18
75 mm. Guns, U. S. A.....	8
155 mm. Howitzers (Schneider).....	408

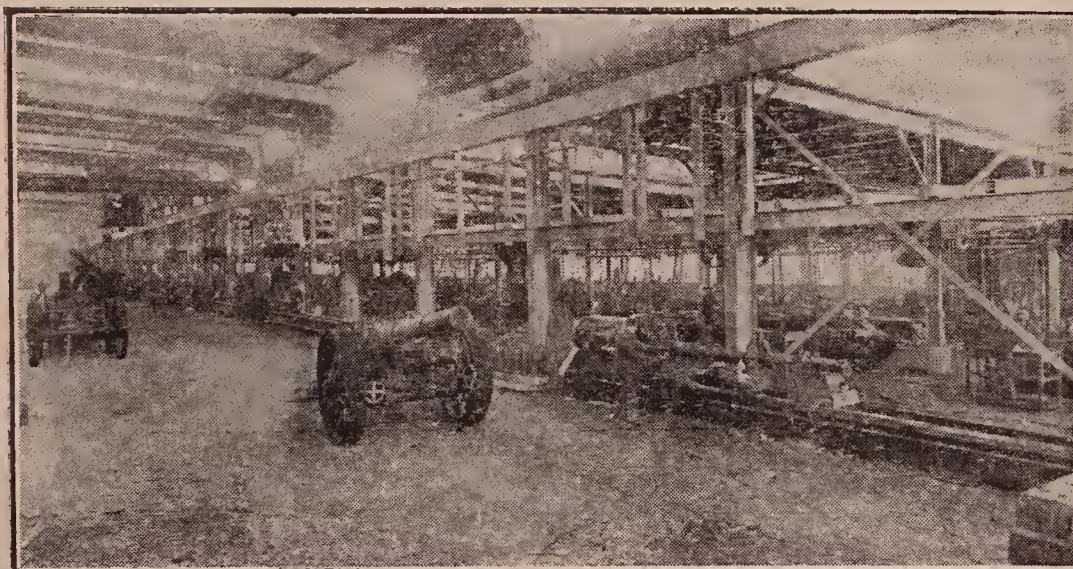


ANOTHER VIEW IN THE WOODWORKING SHOP

155 mm. Guns (G. P. F.).....	147
8 in. Howitzers.....	99
9.2 in. Howitzers.....	24
4.7 in. Guns.....	49

The Small Arms Shop followed the general policy of dismounting all unserviceable rifles, machine guns and pistols, and of cleaning, pickling, greasing and boxing all serviceable parts, while all material in serviceable condition was thoroughly cleaned, greased and boxed for shipment.

Bayonets, sabers, scabbards, other hand arms and accessories were sorted, cleaned, greased and packed for shipment. German rifles and bayonets were cleaned, greased and sent to the States as trophies. This work required the services of approximately 2,096 employees when at its maximum, 1,140 en-



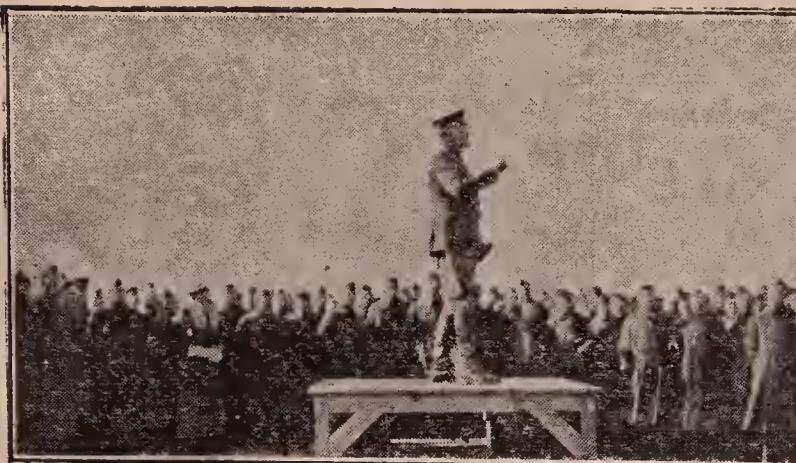
VIEW IN THE CARRIAGE MACHINE SHOP

listed men, 490 French women and 466 Chinese, running two shifts daily. The following summary shows approximately the work accomplished in material shipped up to June 1st:

U. S. Rifles, complete.....	160,000
U. S. Rifles, knocked down and serviceable parts shipped.....	235,665
Browning Auto Rifles.....	8,250
Browning Machine Guns.....	2,700



Hotchkiss Machine Guns	2,000
Vickers Machine Guns	2,200
German Machine Guns	3,500
Tripods, Machine Guns	5,000
Magazines, Misc.	200,000
Pistols, Colt A to Cal. 45	58,000
Revolvers Colt, S. & W. Cal. 45	16,600
Bayonets, U.S.	180,000
Bayonets, German	15,000



GENERAL PERSHING ADDRESSING THE TROOPS AT THE O. R. S.

All gun sights, optical and other fire control instruments were handled by the Optical Repair Division. Many of the instruments were received in a serious stage of deterioration due to lack of care, and it was only by prompt action on the part of this division that many of these exceedingly valuable instruments were saved. This work was undertaken by a force of two commissioned officers, 101 enlisted men and thirty-eight French men and women. Following is a summary of the fire control and optical instruments cleaned, repaired, packed and shipped:

Allied Instruments	32,208
Enemy Instruments	3,135

The making of all boxes and crates for the shipment of material was accomplished by the Woodworking Division with a force of 235 white soldiers, sixty colored men, and fifty Chinese, working two shifts. Approximately 80,000 boxes and crates, also 1,000 targets for the Army of Occupation were manufactured in this shop, along with a

large quantity of other woodworking material. The following is an approximate summary of the principal work done:

Gun tube boxes for 75 mm. Guns	2200
Recuperator crates 75 " "	1900
Wheel " " " "	1900
Trail brake and axle crates for 75 mm. Guns	1900
Spare part boxes	1900
Improvised landscape targets	1010
Packing blocks	111500
Breech and muzzle plugs	10000
Crates for German rifles	7800
Miscellaneous boxes cases and crates	27000



ENEMY ARTILLERY PARKED NEAR ORDNANCE REPAIR SHOP.

During this time the Construction and Maintenance Division had a squad of twenty-five men working continually on the salvaging of packing cases, and the Woodworking Division kept another squad on the same work. The wood which came in during the winter months was so wet and green as to be unsuitable for the packing of the delicate optical instruments, and wood salvaged from broken rifle cases was used for this purpose. Several thousand rifle boxes were saved, or the wood used in this way.

The Motor Transportation Division overhauled and repaired tractors as follows:

5-Ton Tractors	48
10-Ton Tractors	202
15-Ton Tractors	101
45 H.-P. Tractors	1
Total	352

Previous to May 6th, salvage material was handled by the Salvage Section of the Small Arms Division. The purpose of this section was to sort out the serviceable small arms, optical instruments, etc., and store them until needed by the repair divisions.

On May 6th a new department, called the Salvage Department, consisting of four officers and about 300 enlisted men and laborers was organized to classify and list lots of condemned material, which were offered for sale, and proposals accepted in the usual manner. Great difficulty was experienced in sorting this material, due to the employ

ment of Chinese laborers. Thousands of different articles, both allied and enemy, came in together with the salvage from the battlefields. These had to be sorted according to class, then separated into serviceable and unserviceable, and finally the unserviceable material was sorted according to kind of material, whether steel, brass, aluminum or wood. In less than a month after its organization the department had expanded to about 600 employees and an immense amount of material was sorted, loaded and shipped. Difficulties of shipping were greatly increased on account of the scarcity of suitable cars. Box cars were needed for more valuable material, and only certain kinds of



ANOTHER PARK OF ENEMY ARTILLERY



PILE OF MISCELLANEOUS SALVAGE

French cars were permitted to be used for this work. Up to June 25th, 700 cars, approximately 8,000 tons, of the salvage had been sold and shipped, 43 cars being the record for one day's shipment, and it was estimated that there were still 200 carloads to be handled, practically all of which had been sold. Among the more important articles shipped were:

86 Carloads of Scrap Brass, Approx.	1050 Tons
122 Carloads of Scrap Steel	" 1400 "
99 Carloads of Scrap Iron	" 1100 "
163 Carloads of Scrap Wood	" 820 "
38 Carloads of Artillery Wheels.	

#### *Summary, and Closing of the Shops*

The great amount of work accomplished since the armistice was done with a fluctuating personnel averaging 2,300 soldiers, 900 Chinese, and 600 French civilians. The turnover in some months was as high as 65 per cent., because of the fact that men were constantly being evacuated to the United States. The older and usually the more experienced men were the first to be sent home under the rating system, and the problem of operating the plant and training new personnel at the same time was a most difficult one. It was very similar to the situation experienced during the construction period in the summer of 1918 when the men were being drawn from the construction work to supply Ordnance men to the armies.

To maintain the men employed in the Shops the Military Department of the camp has had an average of 1,000 enlisted men employed in the camp proper for the housing, feeding and entertainment of the men, bringing the total employees required to operate the Repair Shops up to an average of 4,800, with a maximum of 5,900.

The work which was done here is of the utmost importance to the future of our army. The artillery and small arms was put in such shape that it can be stored for years without deterioration. Had this material been left behind in France we would have been in almost the same state of unpreparedness as we were before the war.



FRENCH GIRLS CLEANING AND PACKING SMALL ARMS FOR SHIPMENT TO THE U. S.

On June 10th an embargo was placed on all shipments to Meun from the Third Army, and on June 20th an embargo followed for material from all other points in France, Montoir being designated as the receiving point for the small amount of Ordnance remaining. By June 21st all artillery and most of the small arms had been completed and shipped, and on that date 1,000 men were placed in the evacuation camp to be ready to move to a port on June 25th. The following day 600 more men were drawn for evacuation on July 1st. June 28th was designated as the last working day for the French women, and June 30th as the last day for the remaining 2,700 soldiers. A Care-takers' Detachment of seven officers and 250 enlisted men were left in charge of the camp and shops. The final closing of the property records was left to this detachment.



MISCELLANEOUS SALVAGE UNLOADED ALONG THE YARD TRACK FOR SORTING BEFORE BEING BROUGHT INTO THE SHOPS



The following list is a tabulation of the principal items overhauled at the Mehun Shops and sent to the United States since the Armistice:

*Statement of Small Arms Material Shipped*

Browning Auto. Rifles.....	13,247
Browning Heavy Machine Guns .....	3,456
Colt Auto. Pistols, Cal. 45.....	72,606
Revolvers, S. & W. and Colt. Cal. 45.....	20,655
Hotchkiss M. G. (Repaired and Stored) .....	2,022
Hotchkiss M. G. Tripods .....	2,084
U. S. Sabers.....	2,552
U. S. Rifles, Model 1903 and 1917 .....	209,421
U. S. Rifle Bayonets .....	221,504
U. S. Rifle Grenade Discharger .....	1,777
Vickers Machine Guns .....	2,418
Very Pistols, 25-mm.....	3,399
Very Pistols, 35-mm.....	384
Bolts .....	217,865
Receivers .....	246,109
Upper Bands .....	215,825
German Rifles, .....	72,908
German Bayonets.....	28,410
German M. G. (light) Serviceable.....	3,137
German M. G. (light) Trophies .....	706
German M. G. (heavy) Serviceable.....	1,415
German M. G. (heavy) Trophies.....	650
German M. G. Tripods.....	1,430
German Sabers, Trophies.....	16,210

*Statement of Enemy Artillery Shipped*

77-mm. Guns.....	586
88-mm. Guns (Anti-Aircraft).....	14
105-mm. Guns.....	236
120-mm. Guns.....	6
150-mm. Howitzers .....	573
170-mm. Railroad Mounts.....	2
210-mm. Howitzers .....	106
210-mm. Railroad Mounts .....	1
240-mm. Railroad Mount.....	1
420-mm. Howitzers .....	2
7.62-in. Russian Guns .....	5
76-mm. Trench Mortars .....	461
170-mm. Trench Mortars.....	191
245-mm. Trench Mortars.....	207
105-mm. Spare Howitzer Carriages.....	672
Caissons and Limbers .....	4,231
Other Vehicles.....	343

*Statement of Allied Material Shipped*

75-mm. Guns, all models.....	1,937
4.7-in. Guns .....	49
155-mm. G. P. F. Guns .....	144
155-mm. Howitzers .....	392
8-in. B. L. Howitzer.....	99
9.2-in. B. L. Howitzers.....	24
240-mm. Howitzers .....	6
75-mm. Caissons and Limbers, American .....	271
75-mm. Caissons and Limbers, French.....	613
155-mm. Howitzer Caissons and Limbers .....	240
5-Ton Caterpillar Tractors.....	36
10-Ton Caterpillar Tractors.....	202
15-Ton Caterpillar Tractors.....	98

*Statement of Optical Instruments Shipped*

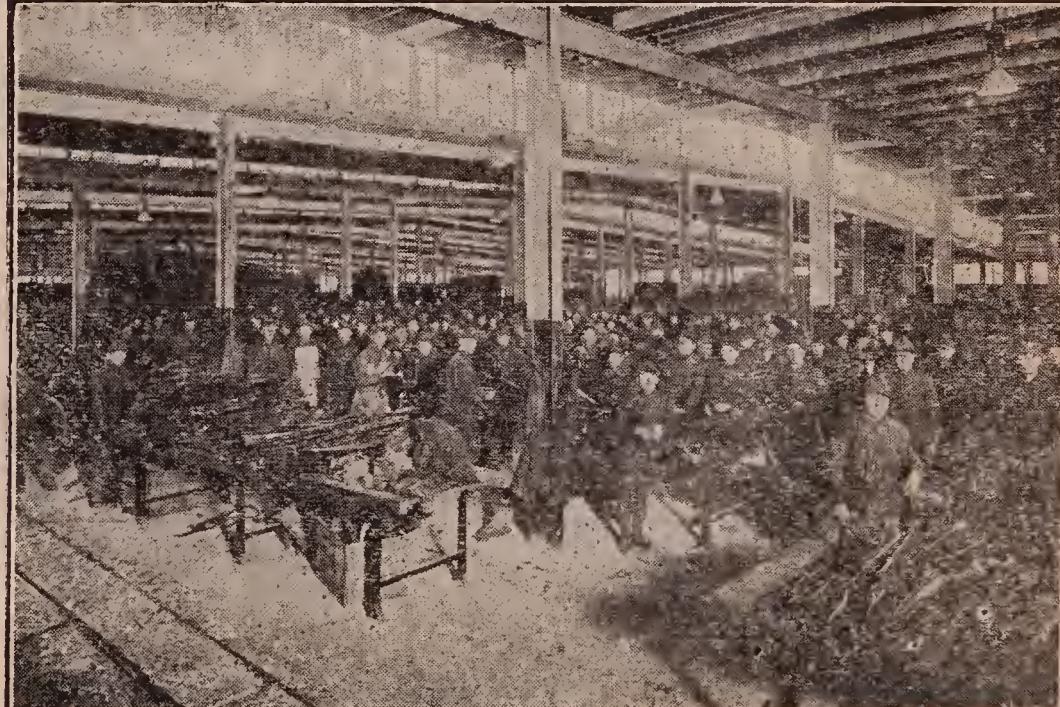
Fire Control and Optical Instr. (Allied) .....	32,238
Fire Control and Optical Instr. (Enemy) .....	3,135



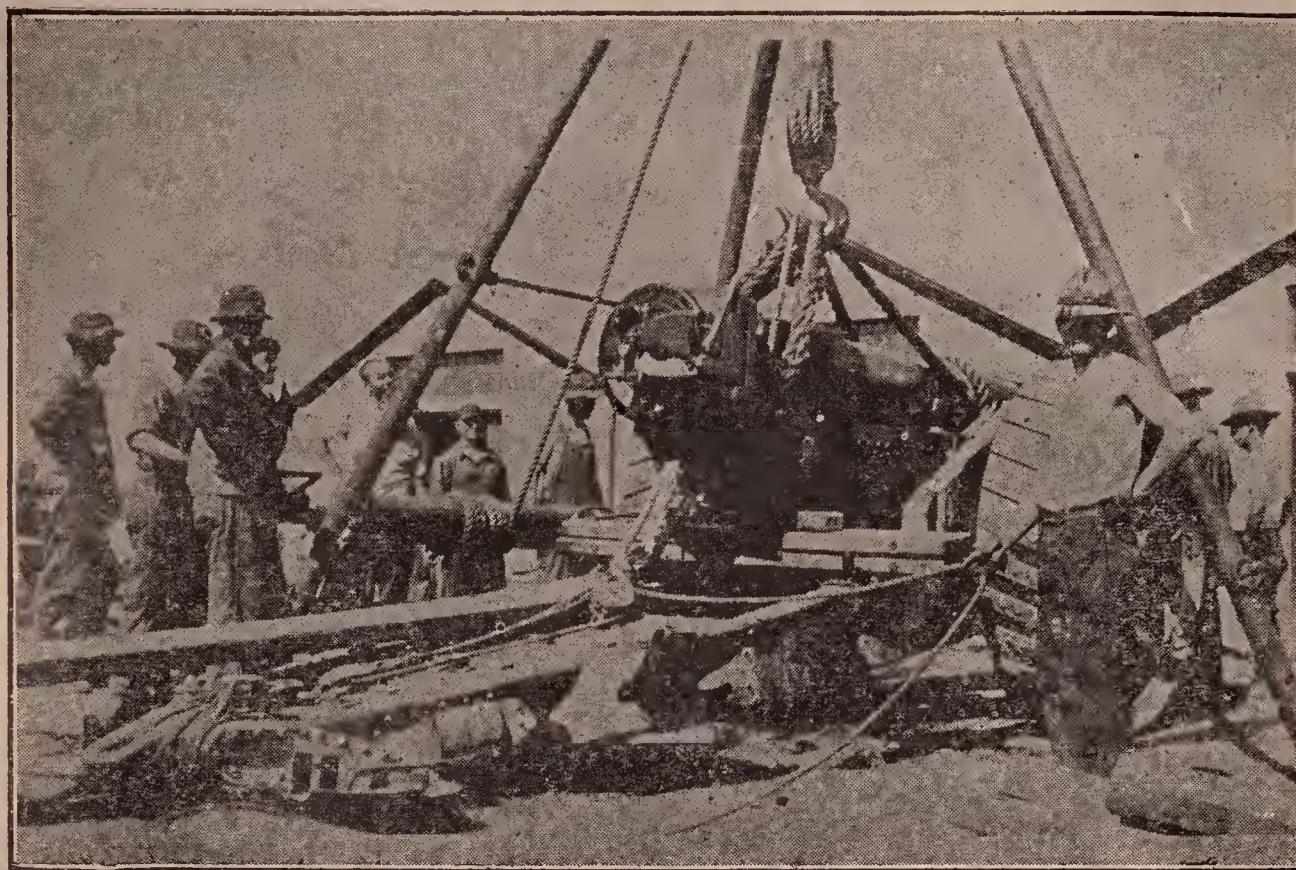
MARSHAL PETAIN INSPECTING ORDNANCE REPAIR SHOPS



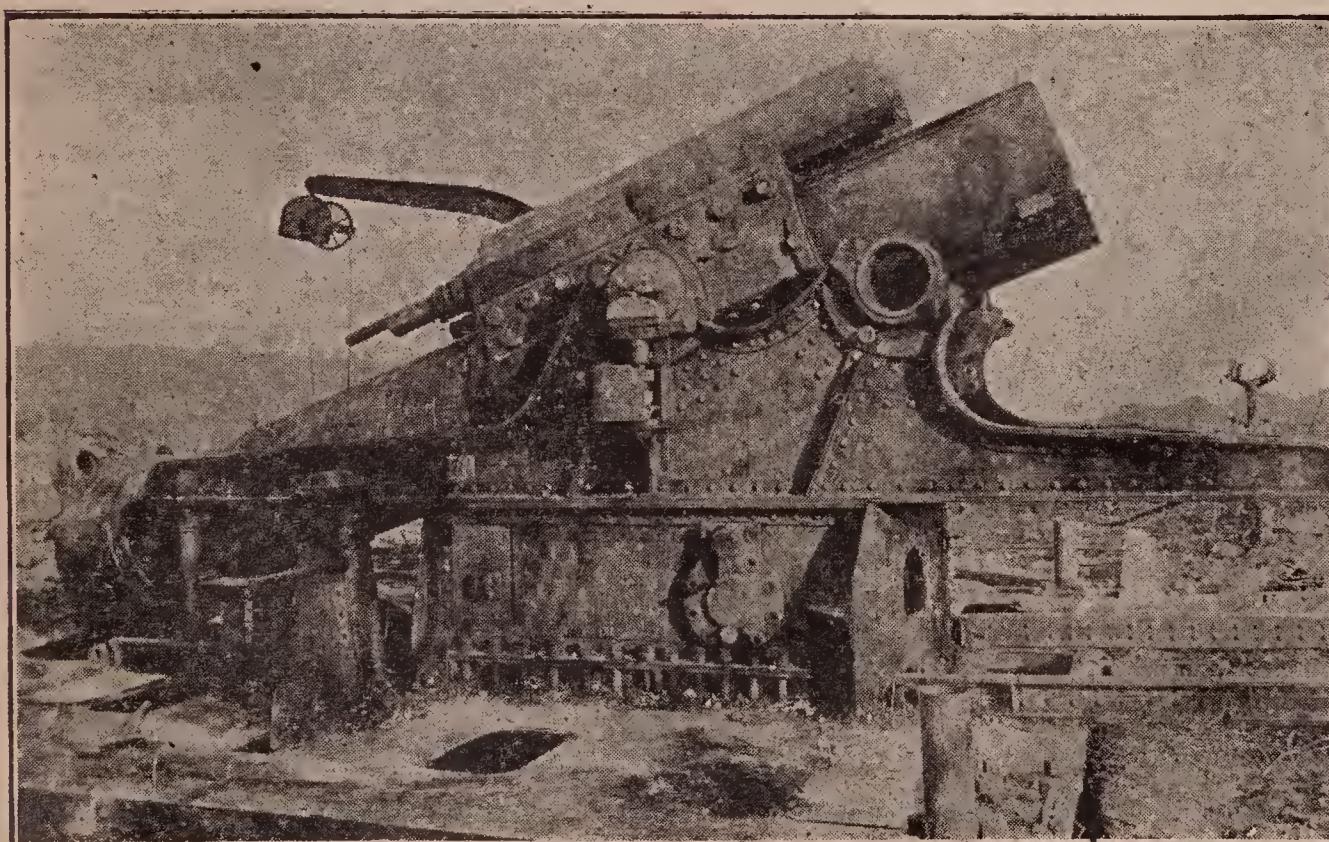
MARSHAL PETAIN after inspecting the Ordnance Repair Shops at Mehun on April 7, 1919, paid the following tribute: "If the Germans had had a chance to see this work before the Armistice they would have asked for it much sooner, because they would have had the conviction that America would go on until their complete crushing. I congratulate the Colonel, his staff, and every working man for the splendid work they have done."



REPAIRING U S RIFLES — SMALL ARMS SHOP



ORDNANCE MEN OVERHAULING ARTILLERY IN THE FIELD



380-MM. AUSTRIAN HOWITZER MOUNTED ON HEAVY WOODEN PLATFORM



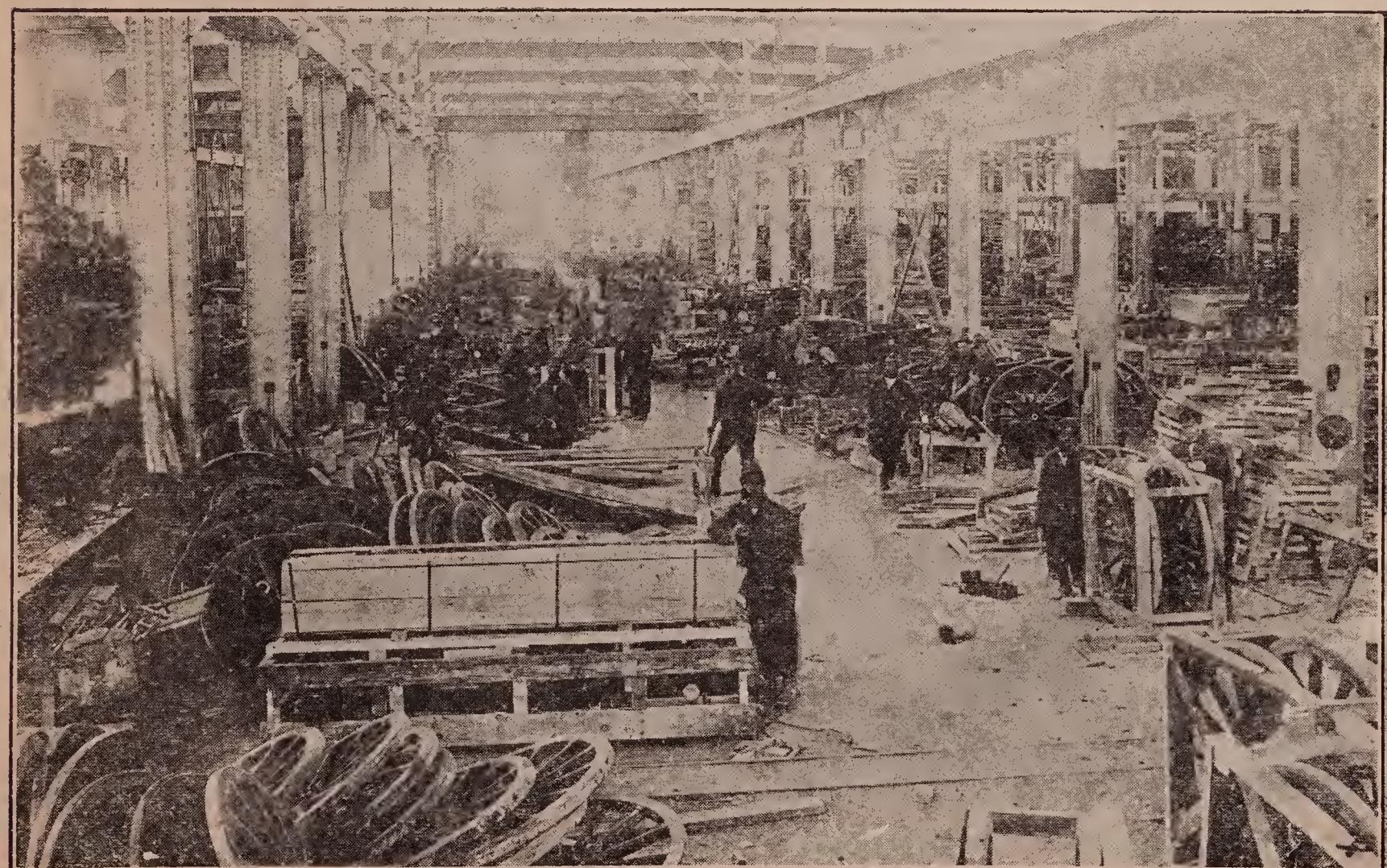
Officers Military Department: Lt. Col. A. G. Gillespie; Majors W. A. Sabin, M. F. McAleer; Captains J. O. Bradshaw, V. Barcus, K. J. Zellner, H. Tallant, T. K. Thompson, O. L. Hemphill, W. F. French, E. F. Westlake, C. McClure, T. M. Dunlap, W. W. Miller; 1st Lieuts., B. W. Perkins, V. G. Katzenstein, G. W. Watkins, E. V. Reed, L. Nichols, L. W. Webb, G. S. Schaller, G. H. Boyer, J. W. Shepheard, O. H. Waldschlager, L. D. Snyder, J. E. Downey, L. B. McCaffery, L. C. Gunther, R. M. Schiller; 2nd Lieuts., H. O. Bernstrom, G. A. Giorloff, A. W. Quennell, L. J. Gage Jr., L. W. Cherry, D. A. Thompson, S. W. Emerick, F. J. O'Hearn, W. T. Ballantyne, M. A. Barancik, W. Hough, G. D. Wands, O. M. Olson, F. S. Kelley, D. F. Wilson, H. T. Cummings; 1st Lieuts., Chaplains F. Fehlner and C. J. Greene.



Officers assigned to Shops: Lt. Col. A. B. Hubbard, Lt. Col. W. W. Doe, Majors G. S. Brady, J. E. Ericson, O. V. Dodge, Jr., J. E. Tompkins; Captains J. E. Felsted, G. D. Sturtevant, J. O. Maxwell, D. J. Walsh, J. B. Haney, F. L. Peterson, J. F. Hanley, V. G. DeCamp, G. A. Wahl, W. S. Lawson, R. O. Hanson, A. Brest, J. W. Pears, J. L. Aney, R. J. Ballard, C. Barnard, J. M. Barnard, P. J. Gaudreau, J. W. Hinchcliff, R. E. Hubert, C. H. Palmer, F. E. Rusk, E. G. Sanders; First Lieutenants E. W. Tatman, K. D. Brown, B. C. Hoey, G. W. Brown, E. G. Lautz, E. A. L. Phelps, C. W. Tholen, L. A. M. Bushnell, J. E. Allen, B. D. Ballantine, L. A. Cady, J. E. Hancock, C. F. Jennings, R. S. Jones, A. F. Malow; Second Lieutenants B. H. Wilder, T. W. King, C. T. Wilmot, H. Friedman, B. S. Long, B. L. Wilcox, C. P. Storms, A. A. Myrberg, I. L. McColister and J. M. Rawlins.



COL. C. M. WESSON, COMMANDING OFFICER, MAJ. J. E. ERICSON, SALVAGE DEPT., LT. COL. A. V. HUBARD, INSPECTION DEPT., LT. COL. W. W. DOE, SHOPS DEPT.,  
MAJ. G. S. BRADY, ADMINISTRATION DEPT., MAJ. O. V. DODGE, SUPPLY DEPT., CAPT. W. F. FRENCH, ADJUTANT



THE LAST OF THE 75-MM. GUNS BEING OVERHAULED AND CRATED, JUNE 20, 1919. ARTILLERY REPAIR SHOP



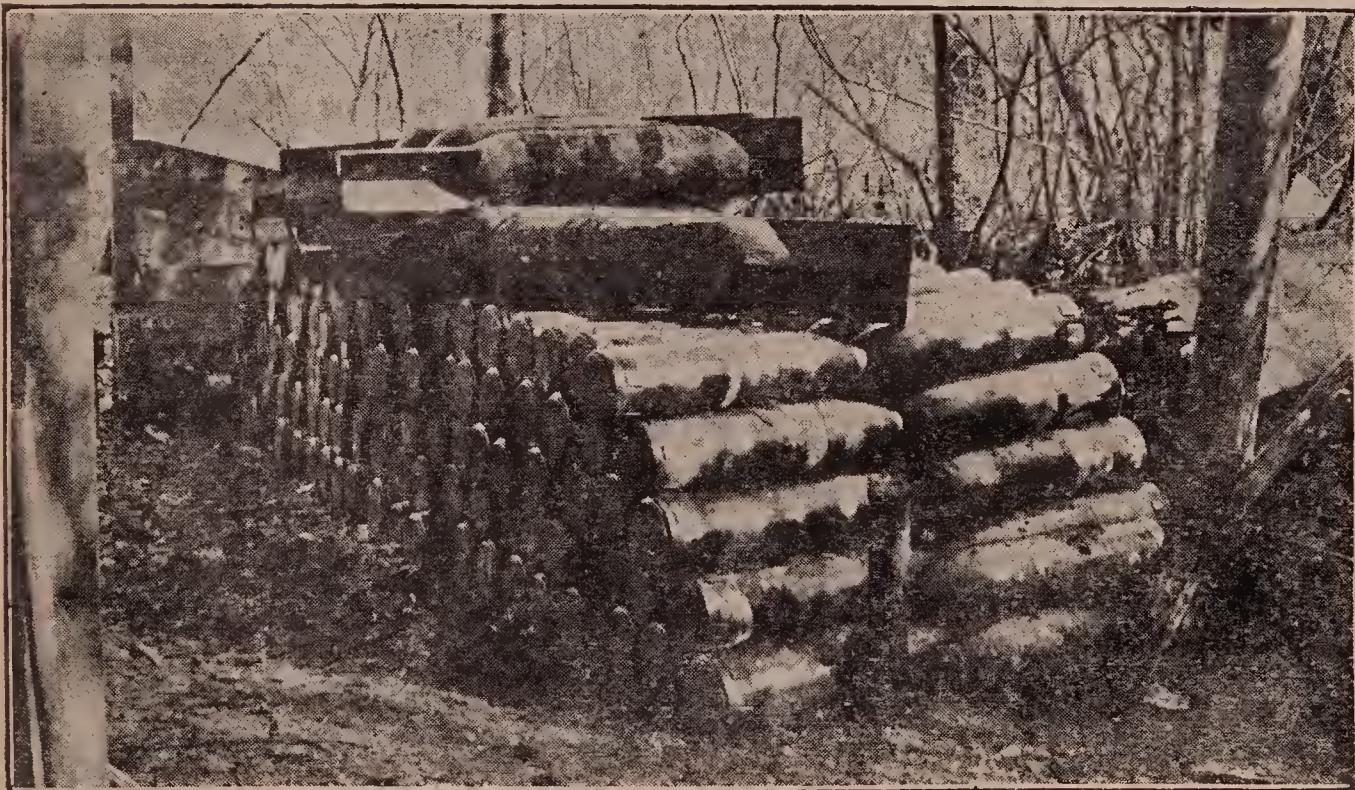
OFFICERS' BALL TEAM: LT. QUENNEL, COL. WESSON, LT. COL. DOE, CAPT. HUBERT, LT. KING,  
LT. THOLEN, LT. SCHALLER, CAPT. FRENCH, CAPT. LAWSON.



CAMP BASEBALL TEAM: L. SAPPER, THEO. FLANNIGAN, JOHN MARTIN, PETER LEJECK, CHAUNCEY O'NEILL, JAMES KILLIAN,  
EWALD HENRY, WILLIAM VARDEMAN, HARRY B. BATES, HARRY M. CRIPPEN, ARLIE LATHAM, SAM BRADSHAW, "LEFTY" VERRAN,  
JOHNNY JOHNSON, JAMES WHITE, DAN GALLAGHER (Trainer), ALFRED T. L. YAPP.



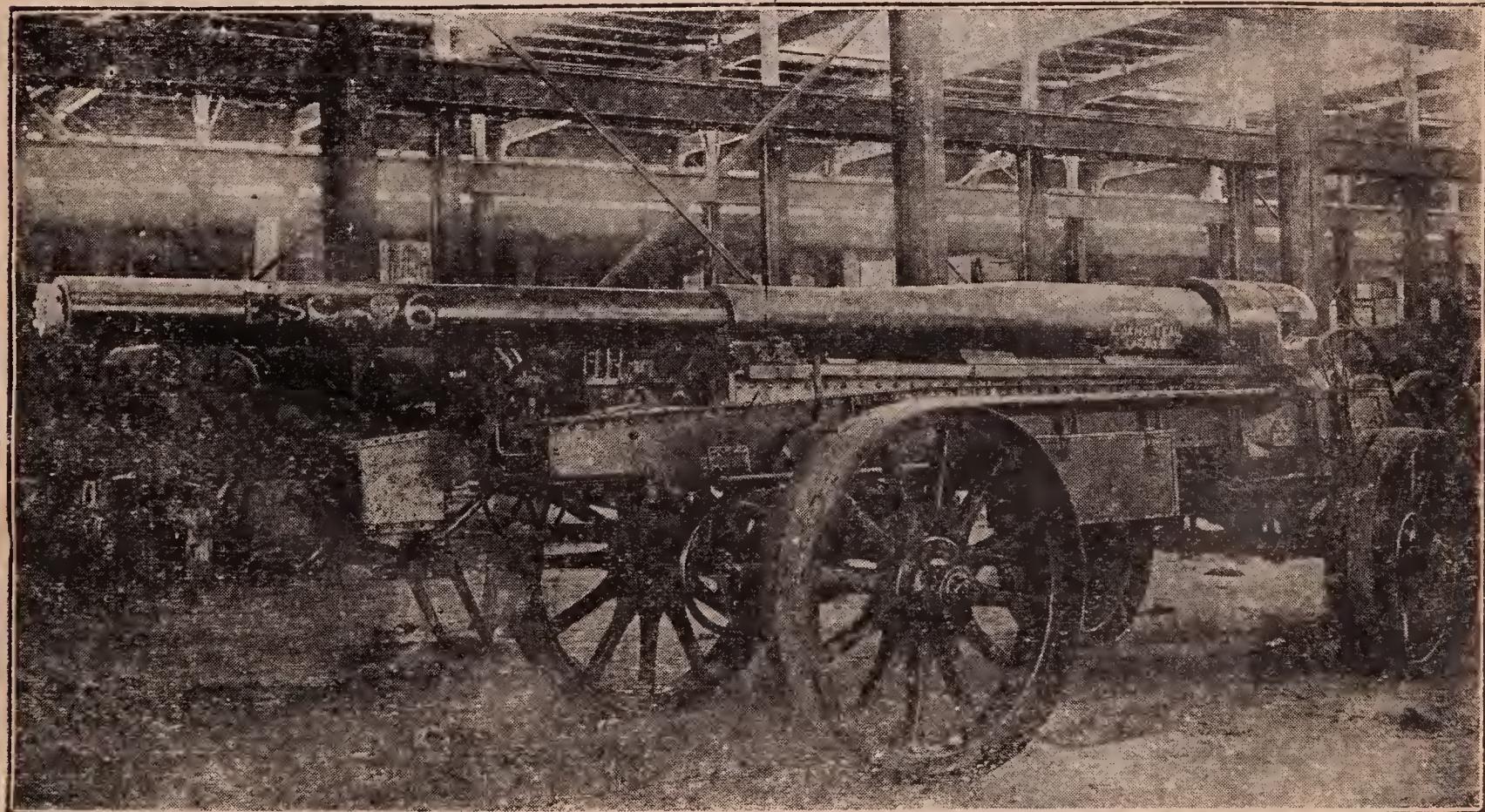
One of the most interesting post-Armistice accomplishments of the Ordnance Corps was the cleaning up of the army areas and the demolition of ammunition. The shells were carefully piled in shell holes or any depression in the ground and dynamite or some of the more sensitive shells or bombs placed on top of the pile as a detonating charge. The fuse led to a fulminate detonator in this charge.



When a hole was not at hand the shells were sometimes piled on the surface. Trench mortar bombs piled for demolition, noses in to get full detonating effect. The winged trench mortar bombs on top are used to set off the pile because of their thin shell, and because their charge is very sensitive and powerful.



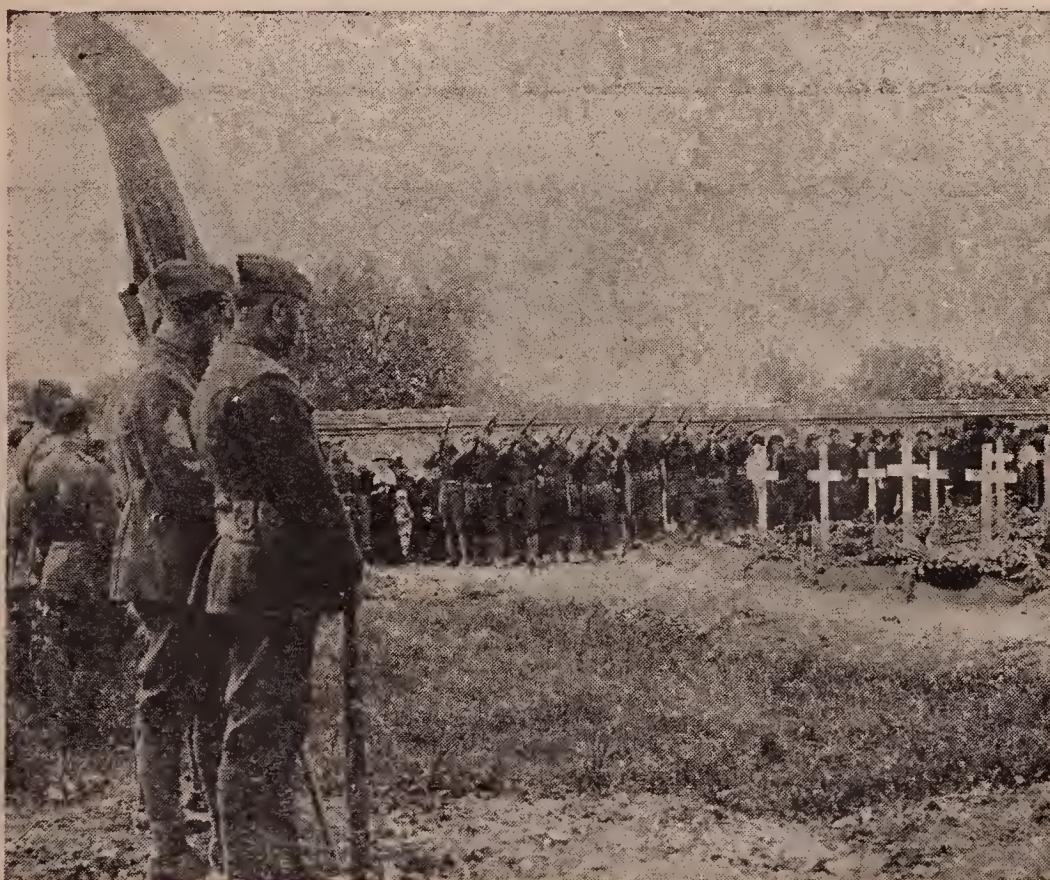
The Press Room of the Print Shop: A well equipped commercial plant. In the last five months approximately 2,000,000 impressions were made, including forms for the shops, placards and passes for the Military Department, "The Mehun News," and this History of the Ordnance Repair Shops.



150 MM. GERMAN RIFLE AND CRADLE ON TRAVELING CARRIAGE.



MEMORIAL DAY SERVICES AT MEHUN CEMETERY, MAY 30, 1919.  
CHAPLAIN FEHLNER DELIVERING ADDRESS.



MEMORIAL DAY SERVICES AT MEHUN CEMETERY—SHOWING THE FIRING SQUAD.

## ORDNANCE REPAIR SHOPS, MEHUN, FRANCE, A. P. O. 741

## ATELIER DE MEHUN-sur-YEVRE, (CHER)



## PLAN OF SHOPS AND CAMP









